

**UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND**

---

MICHAEL LEACOCK, individually and on  
behalf of all others similarly situated,

v.

IONQ, INC., PETER CHAPMAN,  
THOMAS KRAMER, NICCOLO DE MASI,  
HARRY YOU, DARLA ANDERSON,  
FRANCESCA LUTHI, AND CHARLES E.  
WERT,

Defendants.

---

)  
)  
) Civil Action No. 8:22-cv-01306-DLB  
)

) CLASS ACTION  
)

) CONSOLIDATED AMENDED CLASS  
) ACTION COMPLAINT FOR  
) VIOLATIONS OF THE FEDERAL  
) SECURITIES LAWS  
)

) JURY TRIAL DEMANDED  
)  
)

## **TABLE OF CONTENTS**

TABLE OF CONTENTS.....	ii
GLOSSARY OF DEFINED TERMS.....	iv
NATURE OF THE ACTION .....	1
JURISDICTION AND VENUE .....	7
PARTIES .....	8
CONFIDENTIAL WITNESSES .....	12
SUBSTANTIVE ALLEGATIONS .....	13
A.    Background.....	13
i.    Quantum Computing.....	13
ii.   Special Purpose Acquisition Companies (“SPACs”) .....	16
B.    IonQ’s History and Business .....	19
C.    The Business Combination .....	24
i.    Defendants Misleadingly Touted IonQ’s Purported 32 Qubit Quantum Computer With A Quantum Volume of Over “4,000,000” .....	26
ii.   Defendants Misleadingly Touted IonQ’s Miniaturization of Its Quantum Computing Systems .....	37
iii.  Defendants Misleadingly Tout IonQ’s Error Fidelity and Error Correction Capabilities .....	42
iv.   Defendants Misleadingly Touted IonQ’s Contract Bookings.....	45
D.    The Business Combination Closes.....	52
DEFENDANTS’ MATERIALLY FALSE AND MISLEADING STATEMENTS DURING THE CLASS PERIOD .....	54
A.    Misrepresentations Concerning IonQ’s Purported 32 Qubit Quantum Computer .....	54
B.    Misrepresentations Concerning the Miniaturization of IonQ’s Quantum Computing Systems .....	62
C.    Misrepresentations Concerning the Error Rates of IonQ’s Quantum Computers .....	65
D.    False and Misleading Statements Concerning IonQ’s Purported “Tripling” of “Contract Bookings” .....	68
E.    False and Misleading Statements in the Certifications Attached to IonQ’s Quarterly and Annual Reports During the Class Period .....	74
THE TRUTH EMERGES.....	75
ADDITIONAL SCIENTER ALLEGATIONS.....	77
A.    Individual Defendants’ High-Level Positions Within dMY and IonQ.....	79

B.	Importance of 32 Qubit Computer to IonQ.....	80
C.	Corporate Scierter .....	81
	PLAINTIFF’S CLASS ACTION ALLEGATIONS.....	81
	COUNT I .....	85
	(Violations of Section 10(b) of the Exchange Act and Rule 10b-5 Promulgated Thereunder Against the Exchange Act Defendants) .....	85
	COUNT II .....	88
	(For Violations of §14(a) of the Exchange Act and Rule 14a-9 Promulgated Thereunder Against All Defendants).....	88
	COUNT III.....	93
	(Violations of Section 20(a) of the Exchange Act Against the Individual Defendants).....	93
	PRAYER FOR RELIEF .....	94
	DEMAND FOR TRIAL BY JURY .....	95

**GLOSSARY OF DEFINED TERMS**

<b>Term</b>	<b>Definition</b>
32 Qubit Post	Article Unveiling the 32 Qubit Quantum Computing System, dated October 1, 2020
32 Qubit Release	Press Release Unveiling the 32 Qubit Quantum Computing System, dated October 1, 2020
AWS	Amazon Web Services
Analyst Presentation	Analyst Day Presentation, given April 13, 2021
Anderson	Defendant Darla Anderson, Director of dMY from November 2020 until the Business Combination
Announcement Video	Video Introducing Quantum Computing and IonQ to Investors, published March 8, 2021
Approval Release	Press Release Announcing Shareholder Approval of the Business Combination, dated September 28, 2021
Azure	Microsoft Azure
Benchmark	The Benchmark Company, LLC
Benchmark Report	The Benchmark Company, LLC Report, dated July 8, 2021
Benzinga Interview	Benzinga Interview, given March 9, 2021
Board	IonQ's Board of Directors
Bookings Release	Press Release Announcement of Tripled Bookings, dated September 9, 2021
Business Combination	Merger Between a Subsidiary of dMY and Legacy IonQ
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CH Report	Craig-Hallum Report, dated June 30, 2021
Chapman	Defendant Peter Chapman, CEO and member of the Board
Chapman Benzinga Interview	Benzinga Interview with Defendant Chapman, given July 23, 2021
Class Period	March 7, 2021 to May 2, 2022
Closing Release	Press Release Announcing Closing of the Business Combination, dated September 30, 2021
Company	IonQ, Inc., f/k/a dMY Technology Group, Inc. III

<b>Term</b>	<b>Definition</b>
Complaint	Plaintiff's Consolidated Amended Complaint for Violations of the Federal Securities Laws
CPU	Central Processing Unit
CW1	Confidential Witness 1
De Masi	Defendant Niccolo De Masi, CEO and Director of dMY from Inception to the Business Combination, and Thereafter Board Member of IonQ
Defendants	Collectively IonQ, Chapman, Kramer, De Masi, You, Anderson, Luthi, and Wert
dMY	dMY Technology Group, Inc.
Duke	Duke University
Exchange Act	The Securities Exchange Act of 1934, Pub. L. 73–291, 48 Stat. 881, 15 U.S.C. § 78a et seq.
Exchange Act Class	Class of All Persons or Entities Who Purchased or Otherwise Acquired IonQ Securities During the Class Period and Who Were Damaged Thereby
Expected Closing Release	Press Release Announcing Expected Closing of the Business Combination, dated September 27, 2021
Founders	Chris Monroe and Jungsang Kim, the co-founders of Legacy IonQ
First Amended S-4	First Amended Registration Statement filed on Form S-4 with the SEC, dated June 17, 2021
ICR Discussion	ICR Inc. Discussion July 15, 2021
Individual Defendants	Defendants Chapman, Kramer, De Masi, You, Anderson, Luthi, and Wert
IonQ	IonQ, Inc., f/k/a dMY Technology Group, Inc. III
IonQ Paper	“Low Depth Amplitude Estimation On a Trapped Ion Quantum Computer,” published September 21, 2021
IPO	Initial Public Offering
IPO Edge Chat	Chat Hosted by IPO Edge on September 15, 2021
Kim	Jungsang Kim, Co-Founder of Legacy IonQ
Kramer	Defendant Thomas Kramer, CFO of Legacy IonQ from February 2021 until the Business Combination, Thereafter CFO of IonQ
Legacy IonQ	IonQ, Inc.
Legacy IonQ Warrants	Legacy IonQ Warrants Exercisable for One Share of Class A Common Stock Exercisable for \$1.38 per Share

<b>Term</b>	<b>Definition</b>
License Agreement	Agreement Between Legacy IonQ, UMD, and Duke to License Certain Patents and Intellectual Property
Luthi	Defendant Francesca Luthi, Director of dMY from November 2020 until the Business Combination
May 4 Response	Press Release Responding to the Scorpion Report, dated May 4, 2021
May 12 Response	Press Release Responding to the Scorpion Report, dated May 12, 2021
May 2022 Investor Update Call	Earnings Call for the First Quarter of 2022, May 16, 2022
Merger Announcement Release	Press Release Announcing Merger, dated March 8, 2022
Merger Sub	Wholly Owned Subsidiary of dMY, Ion Trap Acquisition Inc.
Monroe	Chris Monroe, Co-Founder of Legacy IonQ
NYSE	New York Stock Exchange
Nature Article	K. Wright, <i>et al.</i> , <i>Benchmarking an 11-qubit Quantum Computer</i> , Nature.com, Nov. 29, 2019, <a href="https://www.nature.com/articles/s41467-019-13534-2">https://www.nature.com/articles/s41467-019-13534-2</a>
PIPE Investment	Private Investment in Public Equity
Plaintiffs	Collectively Lead Plaintiffs Cheon Jong Ku and Anthony Defeo and Named Plaintiffs
Proxy	Proxy Statement filed with the SEC for the Business Combination, dated August 12, 2021
Q3 2021	Third Quarter of 2021
Q3 2021 Call	Earnings Call with Investors for the Third Quarter of 2021, November 15, 2021
Q-Lab	National Quantum Lab at Maryland
Quantum Landscape Transcript	Quantum Landscape Video Transcript, dated April 13, 2021
Roadshow Presentation	IonQ Investor Presentation, dated March 8, 2021
Roadshow Transcript	IonQ Investor Presentation Transcript, dated March 7, 2021
S-4	Registration Statement filed on Form S-4 with the SEC, dated March 30, 2021

<b>Term</b>	<b>Definition</b>
Second Amended S-4	Second Amended Registration Statement filed on Form S-4 with the SEC, dated July 16, 2021
September Investor Update Call	Earnings Call to Discuss Recent Achievements, September 20, 2021
September Presentation	Investor Update Presentation, September 20, 2021
Scorpion	Scorpion Capital
Scorpion Report	Report Issued by Scorpion Capital
SEC	Securities and Exchange Commission
Securities Act Class	Class of All Persons or Entities Who Purchased IonQ Securities Pursuant and/or Traceable to the Registration Statement, Prospectus Supplements, and/or the Offering Documents
September 22, 2021 Release	Press Release, dated September 22, 2021
SPAC	Special Purpose Acquisition Company
Third Amended S-4	Third Amended Registration Statement filed on Form S-4 with the SEC, dated August 4, 2021
UMD	University of Maryland
U.S.	The United States of America
Warrants	Warrants Exercisable for One Share of Common Stock at \$11.50 per Share
Wert	Defendant Charles E. Wert, Director of dMY from November 2020 until the Business Combination
You	Defendant Harry L. You, CFO and Director of dMY from Inception until the Business Combination, Thereafter Board Member of IonQ

Court-Appointed Lead Plaintiffs Cheon Jong Ku and Anthony Defeo and Named Plaintiffs (together, “Plaintiffs”), individually and on behalf of all others similarly situated, by Plaintiffs’ undersigned attorneys, for Plaintiffs’ First Amended Complaint (the “Complaint”) against Defendants, alleges the following based upon personal knowledge as to Plaintiffs and Plaintiffs’ own acts, and information and belief as to all other matters, based upon, *inter alia*, the investigation conducted by and through Plaintiffs’ attorneys, which included, among other things, a review of the Defendants’ public documents, conference calls and announcements made by Defendants, United States (“U.S.”) Securities and Exchange Commission (“SEC”) filings, wire and press releases published by and regarding IonQ, Inc., f/k/a dMY Technology Group, Inc. III (“IonQ”, or the “Company”), analysts’ reports and advisories about the Company, and information readily obtainable on the Internet. Plaintiffs believe that substantial additional evidentiary support will exist for the allegations set forth herein after a reasonable opportunity for discovery.

### **NATURE OF THE ACTION**

1. This is a federal securities class action on behalf of a class consisting of all persons and entities other than Defendants that purchased or otherwise acquired IonQ securities between March 7, 2021 and May 2, 2022, both dates inclusive (the “Class Period”), seeking to recover damages caused by Defendants’ violations of the federal securities laws and to pursue remedies under Sections 10(b), 14(a) and 20(a) of the Securities Exchange Act of 1934 (the “Exchange Act”) and Rule 10b-5 promulgated thereunder, against the Company and certain of its top officials.

2. dMY Technology Group, Inc. III (“dMY”) was a publicly traded blank check company, also known as a special purpose acquisition company (“SPAC”), formed for the purpose of effecting a merger, share exchange, asset acquisition, share purchase, reorganization, or similar business combination with one or more businesses. On March 8, 2021, dMY and a private quantum computing hardware and software development company, IonQ, Inc. (“Legacy IonQ”), issued a



press release announcing their plan to bring Legacy IonQ public via a merger between a subsidiary of dMY and Legacy IonQ (the “Business Combination”). The PowerPoint “roadshow” investor presentation (“Roadshow Presentation”) touted to investors that Legacy IonQ (and thus IonQ)<sup>1</sup> had an “*Unparalleled Technological Advantage*” because it had a “*32 qubit quantum computer with an expected quantum volume of 4,194,304, smashing the record for most powerful quantum computer*” that was “*32,000x more powerful than competing quantum systems.*”<sup>2</sup>

3. Defendants stood to reap massive profits if the Business Combination, which required shareholder approval, successfully closed and IonQ’s share price remained high until a “lock-up” agreement expired and Defendants could sell their shares. For example, through an intermediary corporation, Defendants Niccolo De Masi, Harry You, and certain directors of dMY owned *7.5 million shares* of IonQ that would be worth over *\$117 million*—from a de minimis investment of only *\$25,000*—shortly after the Business Combination closed. Likewise, Defendant Peter Chapman, IonQ’s CEO, and Defendant Thomas Kramer, IonQ’s CFO, owned over *4.5 million shares* in IonQ that would be worth over *\$70 million* shortly after the Business Combination closed.

4. Accordingly, Defendants desperately wanted investors to approve the Business Combination and to prop up the price of IonQ’s securities after the closing. Rather than be candid with investors, however, Defendants saturated the market with a flood of statements that were false and/or misleading statements because they failed to disclose that IonQ *did not have a 32-qubit quantum computing system*. In addition, Defendants also induced investors to buy into and/or

---

<sup>1</sup> Unless otherwise indicated, all references to IonQ are to IonQ and Legacy IonQ, the latter of which merged into a subsidiary of dMY and became IonQ when the Business Combination was completed.

<sup>2</sup> All emphasis in this Complaint is added unless otherwise indicated.

approve the Business Combination by failing to disclose that (i) the Company's extant computing system was nowhere near ready to be miniaturized, a key element of IonQ's value proposition; (ii) Defendants had been misleading investors about its systems' error rates and error correction performance; and (iii) an abrupt 300% increase in expected "contract bookings" shortly before the shareholder vote was solely attributable to a transaction with the Company's longstanding benefactor the University of Maryland ("UMD").

5. When the truth underlying each of the misleading statements emerged through a report issued by the research firm Scorpion Capital ("Scorpion Report") six months after the Business Combination closed, the price of IonQ securities plummeted, devastating investors.

6. Quantum computers are fundamentally different from mainframes, supercomputers, or other "classical" computers. Quantum computers, unlike classical computers, use the laws of quantum mechanics (which include complex physics concepts like "superposition," and "entanglement") to represent units of information, and those units of information interact with specially designed hardware and software to solve complex problems. Superposition and entanglement make quantum computers much more powerful than any, even theoretical, future classical supercomputer.

7. These concepts—which include the famous "Schrodinger's Cat" thought experiment referenced in the 2009 film *A Serious Man*—also can be difficult to grasp, even for physicists.<sup>3</sup> Throughout the Class Period, however, Defendants exploited the impenetrably complex nature of quantum computing to hoodwink investors into investing in dMY, approving the Business Combination, and, after the Business Combination closed, investing in IonQ.

---

<sup>3</sup> Early in the film, when a student protests that his failing grade should be changed because he "understands the dead cat," his physics professor scoffs, "even I don't understand the dead cat."

Investors, who lacked the expertise and access to verify Defendants' claims, were completely stunned when the truth emerged upon publication of the Scorpion Report, which emerged as Defendants were positioning themselves to reap tens of millions of dollars in profits from unsuspecting investors.

8. For example, early in the Class Period, on March 8, 2021, Defendants issued a press release announcing the Business Combination ("Merger Announcement Release"). The Merger Announcement Release made a number of impossibly starry-eyed claims to investors about the future of quantum computing, including that quantum computers had the ability to address how to "live sustainably on our planet," "cure diseases," "efficiently move people and goods," "fight against climate change," and "solve vexing problems from materials design to logistics that impact the transportation industry." The release then primed investors to believe that IonQ was uniquely positioned to deliver on this potential because "IonQ, Inc. is the leader in quantum computing, with a proven track record of innovation and deployment. ***IonQ's 32 qubit quantum computer is the world's most powerful quantum computer***, and IonQ has defined what it believes is the best path forward to scale." Indeed, Defendants would repeat this statement so frequently—until, conspicuously, shortly before investors voted to approve the Business Combination—that it effectively served as the Company's tagline.

9. Defendants also released a video on March 8 purporting to introduce quantum computing and IonQ to investors (the "Announcement Video"). In the video, after suggesting that creating a quantum computer could help "feed the world" via eco-friendly synthetic fertilizer, the narrator intoned, "In the five years since its founding, IonQ has remained at the forefront of this quest—the first simulation of water, the first trapped ion system on the cloud, and in October 2020, ***the world's most powerful quantum computer: a 32-qubit system that is a staggering 32,000***

*times more powerful than its closest competitors.*” And Defendants did not just make these statements in a vacuum. They pointed to IonQ’s purported 32 qubit system as the distinguishing factor between IonQ and competitors using similar technology, including that “you could kind of think of it as the Honeywell system [a competitors’ system based on the same technology] . . . maybe a good analogy would be *they have a two qubit bus and we have a 32 qubit bus.*”

10. As the Scorpion Report revealed, however, *none of this was true*. According to multiple former IonQ executives and employees who spoke with Scorpion Capital (“Scorpion”), the 32 qubit system “*was totally made up,*” “*doesn’t exist,*” and IonQ is “*trying to cover up that it’s not there,*” and that the Company’s scientists were furious with the Company’s false claims. A confidential witness (“CW1”) who spoke with Plaintiffs’ investigators in connection with this action, confirmed the accuracy of these allegations, stating that he learned from IonQ’s scientists that the system did not exist. In fact, although Defendant Chapman assured investors that certain privileged customers had been accessing the machine, it was eventually disclosed that those customers had only been working with *four qubits*, and there was no evidence of a 32 qubit machine. Incredibly, when a former IonQ confronted Defendant Chapman about the fact that IonQ did not have a 32 qubit computing system, Chapman responded, “We’ll have it one day. We’re working on it.”

11. In addition, Defendants claims of 4 million qubit volume that was 32,000 times more powerful than any competing system was a fantasy. No one at IonQ appeared to have actually tried to create a 4 million qubit volume; rather, IonQ simply multiplied a hypothetical number of qubits with other parameters, like qubit “lifetime” and “coherence time” and treated the result as a total quantum volume exceeding 4 million. At bottom, the calculation resembled sitting at a

kitchen table and fantasizing about how many vacation homes one could buy after winning the Powerball lottery rather than quantum computing.

12. Defendants' misrepresentations to investors did not stop there. As part of their media blitz promoting the Business Combination, Defendants assured investors that the Company could easily miniaturize its systems, and that those systems had over 99.98% "fidelity" (i.e., accuracy) and could correct errors much more efficiently than competitors' systems. These statements were also materially misleading, as the Scorpion Report revealed that the Company's systems was a massive "elephant"-sized "skunkworks" that was nowhere near miniaturization, and featured a fidelity of 70%. In addition, statements about error correction relied on a false equivalence because they compared—unknownst to investors—the capabilities of IonQ's limited, early-stage system with a hypothetical fully operational system. Finally, while Defendants spent the three weeks before the Business Combination closed touting a sudden tripling of expected "contract bookings," Defendants communicated to investors that the bookings were the result of Fortune 500, government, and other cloud-based customers recognizing the value of IonQ's technology, when in reality the bookings were the equivalent of a gift from UMD, which held tens of thousands of IonQ shares (and thus stood to benefit from the closing of the Business Combination) and was a long-time benefactor of the Company.

13. The truth emerged on May 3, 2022 when Scorpion released the Scorpion Report. IonQ's share price had closed at \$7.86 on May 2, 2022, but after the report was published the following morning, May 3, 2022, the Company's share price fell \$0.71, or 9.03%, to close at \$7.15 per share on nearly triple its usual trading volume. The following day, Defendants issued an anodyne press release that did not dispute—or even address—any of the claims in the Scorpion Report. Recognizing that the Company had not disputed any of the report's core contentions,

IonQ's share price collapsed, falling to \$6.23 (down 16.9%) on May 5, and then continuing to fall all the way to \$4.34 on May 11, 2022, down a total of \$3.52 (or 44.8%).

14. On May 12, desperate to halt the stock's collapse, IonQ's founders issued another press release calling the Scorpion Report "riddled with disinformation, demonstrating a breathtaking ignorance of the quantum computing industry in general and IonQ technology in particular" ("May 12 Response"). Once again, however, the May 12 Response did not address, let alone try to refute, *any* of the Scorpion Report's claims. Incredibly, the May 12 Response did not even assert that the Company *had a 32 qubit quantum computer*.

15. As a result of Defendants' wrongful acts and omissions, and the precipitous decline in the market value of the Company's securities, Plaintiffs and other Class members have suffered significant losses and damages.

### **JURISDICTION AND VENUE**

16. The claims asserted herein arise under and pursuant to Sections 10(b), 14(a) and 20(a) of the Exchange Act (15 U.S.C. §§ 78j(b) and 78t(a)) and Rule 10b-5 promulgated thereunder by the SEC (17 C.F.R. § 240.10b-5).

17. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. § 1331 and Section 27 of the Exchange Act, 15 U.S.C. § 78aa.

18. Venue is proper in this Judicial District pursuant to Section 27 of the Exchange Act, *id.*, and 28 U.S.C. § 1391(b). IonQ is headquartered in this Judicial District, Defendants conduct business in this Judicial District, and a significant portion of Defendants' actions took place within this Judicial District.

19. In connection with the acts alleged in this complaint, Defendants, directly or indirectly, used the means and instrumentalities of interstate commerce, including, but not limited

to, the mails, interstate telephone communications, and the facilities of the national securities markets.

### **PARTIES**

20. Lead Plaintiffs Anthony Defeo and Cheon Jong Ku, as set forth in their previously filed certifications (Dkt. No. 17-4), joint declaration (Dkt. No. 17-7), and exhibit (Dkt. No. 17-5), acquired IonQ securities at artificially inflated prices during the Class Period and were damaged upon the revelation of the alleged corrective disclosures or materializations of concealed risks.

21. Lead Plaintiff Defeo held at least 2,000 Class A shares of dMY common stock on August 16, 2021. *See* Dkt. 17-5 at 2. Accordingly, as set forth in the proxy statement for the Business Combination dated August 12, 2021 and filed with the SEC pursuant to Rule 424(b)(3) on August 12, 2021 (the “Proxy”), and the amended preliminary proxy statement/prospectus for the Business Combination dated August 10, 2021 and filed on Form S-4 with the SEC on August 11, 2021, Lead Plaintiff Defeo was entitled to vote and have his votes counted at the special meeting of shareholders to approve the Business Combination because he held Class A shares of dMY at 5:00 p.m. (New York City time) on August 16, 2021.

22. Named Plaintiff Ng Yu, as set forth in his previously filed certification, declaration, and exhibit (Dkt. Nos. 23-4, 23-6, & 23-7), acquired IonQ securities at artificially inflated prices during the Class Period and was damaged upon the revelation of the alleged corrective events.

23. Defendant IonQ, Inc. (“IonQ”) is a Delaware corporation with principal executive offices located at 4505 Campus Drive, College Park, MD 20740. The Company’s securities trade in an efficient market on the New York Stock Exchange (“NYSE”) under the ticker symbols “IONQ,” for the Company’s Class A Common Stock, and “IONQ.WS” for the Company’s warrants. Prior to the Business Combination, dMY Technology Group, Inc. III (“dMY”), was a Delaware corporation with principal executive offices located at 1180 North Town Center Drive,

Suite 100, Las Vegas, Nevada 89144, and its securities traded on the New York Stock Exchange (“NYSE”) under the ticker symbols “DMYI.U,” “DMYI”, and “DMYI WS.” As a result of the Business Combination, a wholly owned subsidiary of dMY (“Merger Sub”) merged with and into Legacy IonQ, with the surviving entity remaining a wholly owned subsidiary of dMY. dMY then changed its name to IonQ, Inc., *i.e.*, Defendant IonQ.

24. Defendant Peter Chapman (“Chapman”) served as IonQ’s president and chief executive officer (“CEO”) and a member of its board of directors from May 2019 to present. Defendant Chapman reviewed, contributed to, authored, approved, and disseminated the initial S-4 registration statement for the Business Combination, which Defendants filed with the SEC on March 30, 2021 (the “S-4”), the First Amended S-4 registration statement, which Defendants filed with the SEC on June 17, 2021 (the “First Amended S-4”), the Second Amended S-4, which Defendants filed with the SEC on July 16, 2021 (the “Second Amended S-4”), the Third Amended S-4, which Defendants filed with the SEC on August 4, 2021 (the “Third Amended S-4”),<sup>4</sup> and the Proxy.

25. Midway through the Class Period, in September 2021, IonQ revised its employment agreement with Defendant Chapman. Under the amended agreement, Chapman received, among other things, a base salary of \$350,000 and an option to purchase 2,000,000 shares of common stock.

26. Defendant Thomas Kramer (“Kramer”) has served as IonQ’s chief financial officer (“CFO”) from February 2021 to the present. Defendant Kramer was also IonQ’s secretary from the closing of the Business Combination to March 2022. Defendant Kramer reviewed, contributed

---

<sup>4</sup> Herein, “Registration Statement” refers collectively to the S-4 and First, Second, and Third Amended S-4s, unless otherwise indicated.



to, authored, approved, and disseminated the Registration Statement and Proxy. When Defendant Kramer joined IonQ in February 2021, he was granted rights to 2,251,538 shares of IonQ stock.

27. Defendant Niccolo De Masi (“De Masi”) was the Chief Executive Officer and a Director of dMY from its inception (prior to the start of the Class Period) to the closing of the Business Combination on September 30, 2021. Since the closing of the Business Combination, Defendant De Masi has served as a member of IonQ’s board of directors (the “Board”). Defendant De Masi reviewed, contributed to, authored, approved, disseminated, and/or signed the Registration Statement and Proxy. Defendant De Masi reviewed, contributed to, authored, approved, and disseminated the Proxy.

28. Throughout the Class Period, Defendant De Masi emphasized to investors that he was “a physicist, originally,” with an “undergrad and master’s degree . . . from Cambridge University in physics,” who had “follow[ed] the quantum computing space for over 20 years” and thus had insight into the quality of IonQ’s quantum technology. Defendant De Masi made these and other similar representations at a March 8, 2021 interview with investment media outlet Benzinga (“Benzinga Interview”), in a discussion with analysts and investors on July 15, 2021 (“ICR Discussion”), and in a September 14, 2021 virtual “fireside chat” hosted by IPO Edge (“IPO Edge Chat”). In fact, during the IPO Edge Chat, Defendant De Masi assured investors that his physics background enabled him to perform the due diligence on IonQ led to dMY choosing to merge with IonQ:

***We did a lot of diligence, had a lot of proprietary advantages doing that diligence given my background and my partner’s background at dMY. Ultimately, we picked what we consider to be the clear head and shoulders leader in the industry. Almost any metric you can think of, other than cash wasted, IonQ is the leader.***

29. Defendant Harry L. You (“You”) was the Chief Financial Officer and a Director of dMY from its inception (prior to the start of the Class Period) to the closing of the Business

Combination on September 30, 2021. Since the closing of the Business Combination, Defendant You has served as a member of IonQ's board of directors. Defendant De Masi reviewed, contributed to, authored, approved, disseminated, and/or signed the Registration Statement and Proxy. Defendant You signed the letter to shareholders that appeared at the start of the Proxy. "By Order of the Board of Directors," Defendant You signed the "Notice of Special Meeting" of dMY that was enclosed in the Proxy. Defendant You reviewed, contributed to, authored, approved, and disseminated the Proxy.

30. Defendant Darla Anderson ("Anderson") was a Director of dMY from November 2020 until the Business Combination. Defendant Anderson reviewed, contributed to, authored, approved, disseminated, and/or signed the Registration Statement and Proxy.

31. Defendant Francesca Luthi ("Luthi") was a Director of dMY from November 2020 until the Business Combination. Defendant Luthi reviewed, contributed to, authored, approved, disseminated, and/or signed the Registration Statement and Proxy.

32. Defendant Charles E. Wert ("Wert") was a Director of dMY from November 2020 until the Business Combination. Defendant Luthi reviewed, contributed to, authored, approved, disseminated, and/or signed the Registration Statement and Proxy.

33. Defendants Chapman, Kramer, De Masi, You, Anderson, Luthi, and Wert are sometimes referred to herein as the "Individual Defendants."

34. The Individual Defendants possessed the power and authority to control the contents of IonQ's SEC filings, press releases, and other market communications. The Individual Defendants were provided with copies of IonQ's SEC filings and press releases alleged herein to be misleading prior to or shortly after their issuance and had the ability and opportunity to prevent their issuance or to cause them to be corrected. Because of their positions with IonQ, and their

access to material information available to them but not to the public, the Individual Defendants knew that the adverse facts specified herein had not been disclosed to and were being concealed from the public, and that the positive representations being made were then materially false and misleading. The Individual Defendants are liable for the false statements and omissions pleaded herein.

35. IonQ and the Individual Defendants are collectively referred to herein as “Defendants.”

36. Defendants are liable for: (i) making false statements; (ii) failing to disclose adverse facts known to them about IonQ; and (iii) engaging in a scheme to defraud. Defendants’ fraudulent scheme and course of business that operated as a fraud or deceit on purchasers of IonQ’s securities was a success, as it: (i) deceived the investing public regarding the truth about IonQ’s business operations and financial prospects; (ii) artificially inflated the prices of IonQ’s securities; and (iii) caused plaintiff and other members of the Class to purchase IonQ’s securities at inflated prices.

#### **CONFIDENTIAL WITNESSES**

37. CW1 was the Vice President of Business Development at IonQ from October 2020 to November 2021, based in southern California. CW1’s job responsibilities included sales and working to line up clients. As Vice President of Business Development, CW1 reported directly to Defendant Chapman. CW1 joined IonQ because “I did want to be associated with the world’s most powerful computer. I thought that was really very interesting.” CW1 left IonQ on his own volition in November 2021.

## **SUBSTANTIVE ALLEGATIONS**

### **A. Background**

#### *i. Quantum Computing*

38. In a traditional or “classical” computer, a central processing unit (CPU) uses computational resources like memory, disk storage and bandwidth, with software, to solve problems. The CPU does this by providing basic units of information as binary digits called “bits,” often represented as either a “1” or “0,” but which also can be represented as true/false, yes/no, on/off, or +/-. Software developers write programs consisting of instructions for the CPU to manipulate data stored in memory, and the instructions and the data are represented in a “binary modulo,” like a string of 0s and 1s. Classical computer bits can only represent a single value—*e.g.*, either 0 or 1—at a time, however, thus computations only can be run sequentially, one at a time.

39. Quantum computers are fundamentally different from “classical” computers. Quantum computers use the laws of quantum mechanics (which include “superposition,” “entanglement,” and “interference”) to represent units of information, and those units of information interact with specially designed hardware and software to solve complex problems.

40. Importantly, a quantum computer is built around “quantum bits,” or “qubits,” rather than “bits.” While a classical bit can be only *either* a 0 *or* a 1, a qubit can exist in a “superposition” of 0, 1, and any value in between. One way to visualize “superposition” is to imagine a sphere inside of which a radius (*i.e.*, a line from the center to the surface of the sphere) moves in all directions. One point of the sphere represents “0,” and an opposing point represents “1.” The rest of the sphere’s surface represents all other values in between. Thus, like the Schrodinger’s Cat thought experiment, where one does not know whether a hypothetical cat is alive or dead, one does not know where the radius inside the sphere is pointing, however, and thus the radius is in a state

of “superposition,” producing a statistical distribution of all possible outcomes of all known values. “Superposition” thus starkly contrasts with the 0 *or* 1 used by a classical computer.

41. In addition to superposition, individual qubits also can exist in a state of “entanglement,” which allows one qubit to instantly share all of its information with another “entangled” qubit, even though there is no connection between the two qubits and they may be separated by great distances. “Entanglement” exponentially accelerates computing performance, especially if a quantum computer can entangle more than 2 qubits. Superposition and entanglement make quantum computers much more powerful than any, even theoretical, future supercomputer.

42. There are many different ways (or “modalities”) to perform quantum computing, including “superconducting,” “photons,” “neutral atoms,” “trapped ions,” and others. “Trapped ion” computing uses ions, which are atoms that have a net electric charge and are made by removing an electron from an atom. A trapped ion quantum computer uses confines and suspends (*i.e.*, “traps”) ions in free space using electromagnetic fields, and qubits are stored in the electronic states of each ion. Quantum information is then transferred through the qubits in the ions.

43. There is effectively no limit to the number of ions, and thus the number of qubits, that can be loaded into an ion trap.<sup>5</sup> Accordingly, an ion trap quantum computer’s functionality is determined by the number of qubits that actually interact with each other in “gates” and are used to create quantum entanglements, not the number of qubits suspended in ions in an ion trap. In other words, a 50 qubit ion trap quantum computer that only uses 4 qubits in gates is no different from a 10,000 qubit ion trap quantum computer that only uses 4 qubits in gates.

---

<sup>5</sup> See B.B. Blinov, *Quantum Computing With Trapped Ion Hyperfine Qubits*, *Quantum Information Processing*, Vol 3., Nos. 1-5 at 48, <https://iontrap.umd.edu/wp-content/uploads/2012/12/Quantum-Computing-with-Trapped-Ion-Hyperfine-Qubits.pdf>.

44. Furthermore, individual qubits and gates need to present certain other performance metrics to be considered useful, including, but not limited, to “gate fidelity” (a measure of reliability of the gate operation), “gate speed” (the speed of the operation), “coherence time” (how long a qubit remains in its state of quantumness) and “error rate” (how reliable the qubit is).

45. Error rate and error correction are among the biggest challenges in quantum computing. While classical computers are resistant to errors, in quantum computing systems errors can emerge as qubits interact. Indeed, each step of a quantum calculation has a significant chance of introducing error. Once an error is introduced, it will affect the ensuing calculations and “the output will be garbage.”<sup>6</sup>

46. A quantum computer’s error rate is expressed by its “fidelity.” For a quantum computer to function effectively, it must have 99.98% or 99.99% fidelity, *i.e.*, experience errors only 0.01-0.02% of the time. The quantum computing system also must have effective and efficient error correction to fix any errors. Indeed, the inability to correct qubit errors is a reason quantum systems larger than a few hundred qubits have not been built. In addition, finding a solution to error correction is important to the future of quantum computing, as some experts believe that, in some implementations, as many as one thousand qubits or more might be necessary to correct one qubit error.

47. Although quantum technology has the potential to eventually solve problems that have evaded humanity to date, quantum computing is in its infancy. Roughly 100 vendors, startups and labs are currently experimenting with different hardware “modalities” (*i.e.*, ways to conduct quantum computing) in what is known as the “noisy intermediate state quantum” or “NISQ” era.

---

<sup>6</sup> Emily Conover, *To Live Up to the Hype, Quantum Computers Must Repair Their Error Problems*, ScienceNews, Jun. 22, 2020, <https://www.sciencenews.org/article/quantum-computers-hype-supremacy-error-correction-problems>.

“NISQ” era researchers have largely mastered the underlying science and physics of the computers, built most of the required prototypes of hardware components, and assembled them into enterprise products. These productions function in a very limited way, however, and remain far from delivering meaningful results. Some experts say that since late 2021, quantum computing has entered the NISQ-A (for “advantage”) era, where prototypes become powerful enough, under very strict constraints, to produce results that rival classical computing.

48. Quantum computing will deliver meaningful results when it reaches the “fault tolerant quantum computing,” or “FTQC” era, where quantum computers are sufficiently well engineered and optimized to be able to deliver reliable and consistent performance to run complex problems successfully.

ii. *Special Purpose Acquisition Companies (“SPACs”)*

49. United States securities laws allow for public trading of “special purpose acquisition companies,” or “SPACs.” After a SPAC is initially incorporated, it goes public in an IPO. Although it is a public company, the SPAC does not make products or provide services, and has no operating history, assets, revenue, or operations.<sup>7</sup> Instead, the SPAC looks for a private company with which to merge that does provide goods or services. This merger structure (or “de-SPAC” transaction process) allows a private company to “go public” while avoiding the rigorous initial public offering (“IPO”) process. It also has been so harshly criticized as enabling fraud that financial journalists have wondered, pointedly, “*SPACs and fraud: [a] bug or a feature?*”<sup>8</sup>

---

<sup>7</sup> See Daniel S. Riemer, Special Purpose Acquisition Companies: SPAC and Span, or Blank Check Redux?, 85 Wash. U. L. Rev. 931, 933 (2007).

<sup>8</sup> E.g., Andrew Ross Sorkin, et al., *SPACs on Trial: Charges Against the Founder of Nikola Cast a Shadow Over the Blank-Check Boom*, N.Y. Times, July 30, 2021.

50. Upon incorporation, a small group of initial investors, or “founders,” own a portion of the SPAC’s securities called “founders’ shares.” The SPAC then sells a much larger portion of its securities to outside investors in a traditional IPO, which expressly promotes the SPAC as a shell company going public for the purpose of merging with another company. The securities sold in the IPO are “units” comprised of a share of stock and a warrant to purchase additional stock at a later date and at a set price.

51. After the IPO, the SPAC’s management team focuses on finding a target company with which to merge. SPAC founders and managers must consummate a merger within two years, or the SPAC dissolves, and the IPO investors’ funds are returned. Once management identifies a merger target, they present the proposed merger to stockholders for approval. If the merger is approved, investors who do not want to continue to invest in the surviving entity can redeem their shares for a set amount, *e.g.*, ten dollars.

52. SPAC founders or managers are incentivized to complete an acquisition through an unusual compensation scheme. Founders or managers typically purchase (or “subscribe” for) twenty percent of the SPAC’s common equity as founders’ shares for a relatively small amount, *e.g.*, \$20,000-\$25,000, and are compensated by selling those shares after a lock-up period expires following the SPAC’s merger. While the initial investment by managers or founders is not large, it often represents their only way to profit from the SPAC.

53. dMY Technology Group, Inc. III (“dMY”) was a SPAC founded by Defendants De Masi and You “for the purpose of effecting a merger, capital share exchange, asset acquisition, share purchase, reorganization or similar business combination with one or more businesses.”

54. On September 14, 2020, dMY’s “sponsor,” a limited liability company of which Defendant De Masi was a member and which Defendant You managed, subscribed for 7,187,500



founder shares for a total price of \$25,000. In October 2020, the Sponsor transferred 25,000 founder shares to each of Defendants Anderson, Luthi and Wert.

55. dMY went public in an IPO on November 17, 2020, and issued 30,000,000 units at \$10.00 per unit, generating gross proceeds for the SPAC of \$300 million. When the IPO closed, dMY also sold 4,000,000 warrants at a price of \$2.00 per warrant to the “sponsor” LLC. The warrants only could be exercised, however, if dMY successfully merged with another company. As a result of a stock split and certain of the IPO’s conditions, after the IPO closed the “sponsor”—*i.e.*, Defendants De Masi and You, owned 7.5 million founder shares, or approximately 20% of the 37.5 million outstanding shares. In short, for an investment of only \$25,000, Defendants De Maio and You stood to reap tens, or even hundreds of millions of dollars if dMY successfully merged with a target company.

56. After extensive due diligence conducted by De Masi, You, and others, on the morning of March 8, 2021, dMY and Legacy IonQ issued a press release (“Merger Announcement Release”) announcing that Legacy IonQ would go public by merging with dMY (“Business Combination”). The release introduced Legacy IonQ as a quantum computer developer and manufacturer that had “produc[ed] the first and only quantum computer available via the cloud on both Amazon Braket and Microsoft Azure,” and “defined what it believes to be the best path forward to scaling quantum computing power.”

57. The Merger Announcement Release also outlined the order of operations of the Business Combination. Specifically, Legacy IonQ would merge with a wholly owned subsidiary of dMY called Ion Trap Acquisition Inc. (“Merger Sub”), with the surviving entity continuing as a subsidiary of dMY, which would rename itself IonQ, Inc., *i.e.*, “IonQ.”

58. Finally, the release announced that if the Business Combination successfully closed, IonQ would also receive \$350 million from large investors who had agreed to purchase 35 million shares of IonQ as part of a private investment in public equity, or “PIPE” (the “PIPE Investment”). The PIPE investors included Hyundai Motor Co., Kia Corp., New Enterprise Associates, and Alphabet Inc.’s —*i.e.*, Google’s—venture capital arm.

59. Three weeks after the Merger Announcement Release, on March 30, 2021, dMY filed a registration statement on Form S-4 with the SEC (the “S-4”)<sup>9</sup> for the Business Combination.

## **B. IonQ’s History and Business**

60. IonQ is a developer of quantum computing systems that was founded in 2015 by researchers and academics Chris Monroe (“Monroe”) and Jungsang Kim (“Kim,” and together with Monroe, the “Founders”). Monroe was a professor at the University of Maryland (“UMD”) from 2005 to 2020 before becoming a professor at Duke University (“Duke”) in spring 2021. Kim has been a professor at Duke since 2004.

61. Throughout its history, IonQ’s business has been closely intertwined with UMD and Duke. For example, IonQ has long leased office space from UMD for the Company’s corporate headquarters and its research and development and manufacturing facility. More importantly, in July 2016, when Monroe was a UMD professor and Kim was a Duke professor, IonQ entered into an agreement with UMD and Duke to license certain patents and intellectual property that Monroe and Kim had developed, but which belonged to the universities (“License Agreement”). Under the terms of the License Agreement, which has been amended multiple times, and related “option

---

<sup>9</sup> An SEC Form S-4 is filed by a publicly traded company with the Securities and Exchange Commission (SEC). The form is required to register, among other things, any material information related to a merger or acquisition. Kenton, Will, *SEC Form S-4 Defined*, Investopedia.com, Jun. 25, 2020, <https://www.investopedia.com/terms/s/sec-form-s-4.asp#:~:text=SEC%20Form%20S%2D4%20is,offered%20in%20place%20of%20cash.>

agreements,” IonQ was able to use work performed by Monroe and Kim at UMD and Duke to attempt to commercialize ion trap quantum computing systems.

62. In consideration for the rights granted to IonQ under the License Agreement, IonQ issued the University of Maryland and Duke University an aggregate of 35,294 shares of Legacy IonQ common stock, and on June 16, 2021, pursuant to amendment to that agreement, IonQ issued the UMD 63,530 shares of Legacy IonQ common stock. These shares converted into shares of IonQ when the Business Combination closed. Under the universities’ policies, Monroe can receive compensation from UMD and Duke relating to the stock IonQ issued to those schools, and Kim can receive compensation from Duke relating to IonQ stock grants as well.

63. IonQ purports to develop quantum computing systems using the “ion trap” modality described above in Substantive Allegations § A.i. Prior to 2019, the Company built quantum computing systems solely for research and development purposes.

64. On December 11, 2018, at the Q2B Quantum Computing Conference in Palo Alto IonQ presented two trapped ion quantum computers, which it claimed had 160 “stored” and 79 “processing” qubits and thus were the world’s most powerful quantum computers.<sup>10</sup>

65. It quickly became clear, however, that IonQ’s computer used at most only 11 of the qubits, and IonQ eventually came to refer to that computer as its “11 qubit computer.” Indeed, when IonQ published a paper describing the quantum computers’ performance in *Nature*, it

---

<sup>10</sup> Brian Wang, *IonQ Has the Most Powerful Quantum Computers With 79 Trapped Ion Qubits and 160 Stored Qubits*, Next Big Future, Dec. 11, 2018, <https://www.nextbigfuture.com/2018/12/ionq-has-the-most-powerful-quantum-computers-with-79-trapped-ion-qubits-and-160-stored-qubits.html>.

described the devices as an “11-qubit quantum computer” and made no mention of “stored” or “processing” qubits.<sup>11</sup>

66. In 2019, IonQ began to commercialize access to its quantum computing systems, particularly its 11 qubit computer, by allowing customers to pay to access its systems through a platform in “the cloud.” “The cloud” refers to network servers that can be accessed over the internet, and the software and databases that run on those servers. Cloud servers are located in data centers all over the world, allowing users and companies to operate without managing physical servers themselves or running applications on their hardware locally. Three prominent public “cloud” providers are Amazon Web Services’ (“AWS”), Microsoft’s Azure Quantum (“Azure”), and the Google Cloud Marketplace.

67. On October 1, 2020, Defendant Chapman, in his role as IonQ’s CEO, posted an article to IonQ’s website “unveil[ing]” what the Company claimed was now the “most powerful” quantum computer on the market (the “32 Qubit Post”). According to the post, IonQ’s new 32 qubit quantum computing system “validates [IonQ’s] trapped-ion approach,” and “smashes all previous records with *32 perfect qubits with gate errors low enough to feature a quantum volume of at least 4,000,000.*” The 32 Qubit Post further touted that “the introduction of our new 32 qubit system signals a big cornerstone in the journey of quantum computing.” According to Chapman, “[t]he goal in this second phase will be to create a quantum computer that outperforms a supercomputer, and provides meaningful quantum advantage to our customers. We’re not there yet, *but our 32 qubit system is a vital stepping stone in the process.*”

---

<sup>11</sup> K. Wright, *et al.*, *Benchmarking an 11-qubit Quantum Computer*, Nature.com, Nov. 29, 2019, <https://www.nature.com/articles/s41467-019-13534-2> (“Nature Article”).

68. That same day, IonQ issued a press release (the “32 Qubit Release”) that repeated virtually the same information from Chapman’s post, including that the Company was “unveil[ing] its next generation quantum computer system. The new hardware features **32 perfect qubits** with low gate errors, giving it an expected quantum volume **greater than 4,000,000.**”

69. The 32 Qubit Release quoted Defendant Chapman, who said, “[i]n a single generation of hardware, **we went from 11 to 32 qubits**, and more importantly, **improved the fidelity required to use all 32 qubits.**” The release also quoted Monroe, who effused, “[t]he new system we’re deploying today **is able to do things no other quantum computer has been able to achieve**, and even more importantly, we know how to continue making these systems much more powerful moving forward.”

70. As set forth in the 32 Qubit Post and Release, IonQ’s purported 32 qubit system was not made available to any of IonQ’s customers. Instead, the post advised that the “32 qubit system will be first available to [the Company’s] direct partners across energy, pharmaceutical, and manufacturing via private beta, and then commercially available on [cloud providers] AWS Braket and the Microsoft Azure Quantum in early 2021.”

71. Media outlets seized on IonQ’s announcement of a 32 qubit computer. For example, the very day of the announcement, online technology magazine TechCrunch published an article entitled, “IonQ Claims It Has Built the Most Powerful Quantum Computer Yet.” The article pointedly observed that “it’s a pretty extraordinary claim on IonQ’s side, as this would make its system the most powerful quantum computer yet,” and noted “there’s a bit of skepticism within the quantum computing community.” That same day, Newstex Blogs published an article titled, “A Startup Says It Has Built the Most Powerful Quantum Computer Ever,” which noted that,

coincidentally, “IonQ’s announcement comes in the same week that its competitor Honeywell, which also use a version of trapped ions, reported achieving a quantum volume of 128.”

72. Other outlets highlighted IonQ’s claims about quantum volume. For example, on October 7, less than a week after the announcement, Forbes published an article entitled, “IonQ Releases A New 32-Qubit Trapped-Ion Quantum Computer With Massive Quantum Volume Claims.” The authors of the Forbes article recognized that “[t]he most startling part of IonQ’s new announcement *was the claimed enormity of its new computer’s quantum volume,*” and also noted that while “[i]t’s the accepted norm for quantum scientists *to publish scientific proof* of new quantum hardware, software, and theories,” as Honeywell and IBM had done, “rather than running quantum volume circuits with publishable results, *IonQ resorted to calculating the quantum volume.*” In other words, IonQ had simply multiplied a hypothetical number of qubits with other parameters, like qubit “lifetime” and “coherence time” and treated the result as a total quantum volume exceeding 4 million. At bottom, the calculation resembled sitting at a kitchen table and fantasizing about how many vacation homes one could buy after winning the Powerball lottery rather than quantum computing.

73. As alleged in detail below, the journalists covering IonQ’s announcement of its purported 32 qubit system were right to be suspicious. Although the 32 Qubit Post and Release both unequivocally stated that IonQ’s 32 qubit system existed, offered a quantum volume of over 4,000,000, and was the “world’s most powerful quantum computer,” *IonQ did not have a 32 qubit quantum computing system*, and its calculation of 4,000,000 quantum volume was pure fantasy. These facts did nothing to stop Defendants, however, who used these and other misrepresentations about IonQ, its technology, and its “bookings” to defraud unsuspecting investors and ensure that the Business Combination closed.

**C. The Business Combination**

74. According to the Proxy, dMY's merger with Legacy IonQ was hatched on November 13, 2020, just weeks after the 32 Qubit Post and Release, when Defendant De Masi, who had met Defendant Chapman through a mutual friend, emailed Defendant Chapman and asked whether IonQ would be interested in entering into a confidentiality agreement to further discuss IonQ's business.

75. After the confidentiality agreement was executed on November 16, 2020, dMY received access to Legacy IonQ's electronic dataroom, which contained "certain financial forecasts and a management presentation that detailed IonQ's technology, business model, and future growth prospects."

76. By early December 2020, dMY and Legacy IonQ had begun negotiating a non-binding letter of intent for the Business Combination. Legacy IonQ retained Morgan Stanley & Co. LLC as its financial advisor in connection with the potential merger, and dMY engaged Goldman Sachs & Co. dMY and Legacy IonQ executed the letter of intent on December 11, 2020.

77. From December 11, 2020 until the signing of the Merger Agreement on March 7, 2021, dMY management reported regularly to dMY's Board of Directors on, among other things, the status of its due diligence investigation of Legacy IonQ. On December 18, 2020, representatives of dMY and its counsel began accessing an online dataroom set up by Legacy IonQ for the proposed transaction, and dMY's counsel sent Legacy IonQ's counsel due diligence requests. dMY's counsel sent additional requests in writing and on telephone calls with members of Legacy IonQ's management and its legal and financial advisors and representatives of dMY. Indeed, during the IPO Edge Chat, two weeks before investors voted to approve the Business Combination, Defendant De Masi assured investors:

When dMY III set out, we raised the world's first quantum computing focused SPAC last year, and we looked at all the leading two or three dozen companies in the space. ***We did a lot of diligence, had a lot of proprietary advantages doing that diligence given my background and my partner's background at dMY.*** Ultimately, we picked what we consider to be ***the clear head and shoulders leader in the industry.*** Almost any metric you can think of, other than cash wasted, IonQ is the leader.

78. Defendants also emphasized in SEC filings the diligence into Legacy IonQ underlying the Business Combination. For example, the Registration Statement and Proxy described how dMY's Board of Directors conducted extensive due diligence on Legacy IonQ and the Business Combination, including "review[ing] various industry and financial data, including, but not limited to, IonQ's existing business model, IonQ's historical and projected financials, and the results of [dMY] management's due diligence review." In addition, the Registration Statement and Proxy stated that dMY management's due diligence review of IonQ "took place over a sixteen week period beginning on November 16, 2020 and continuing through the signing of the Merger Agreement on March 7, 2021, including extensive meetings and calls with IonQ's management team regarding operations and projections, review of IonQ's material contracts, intellectual property matters, labor matters, [and] financing and accounting due diligence." Finally, in the Registration Statement and Proxy, dMY's Board of Directors, which included Defendants De Masi and You, expressly assured investors that "[b]ased on our due diligence investigations of IonQ and the industry in which it operates, including the financial and other information provided by IonQ in the course of negotiations," investors should vote to approve the Business Combination.

79. On the first day of the Class Period, March 7, 2021, the parties executed the Merger Agreement and other documentation concerning the Business Combination, and on the morning of March 8, 2021, before the markets opened, issued the Merger Announcement Release. If Defendants were able to convince investors to ratify the Business Combination and kept IonQ's



share price up until the lock-up preventing them from selling their shares expired one year after the Business Combination closed, Defendants stood to reap tens or even hundreds of millions of dollars in profits.

80. To ensure that the Business Combination closed and that IonQ's share price remained high until the lock-up expired, Defendants repeatedly misrepresented that IonQ had a 32 qubit quantum computing system that was the world's most powerful quantum system, that IonQ was in position to miniaturize that system, and that IonQ's existing 11 qubit system was over 99.9% accurate. In addition, just before the Business Combination closed, Defendants touted to investors that the Company had "tripled its bookings" for 2021, and thus was generating massive customer interest, when in reality the increase in bookings was solely from a contract with related party UMD.

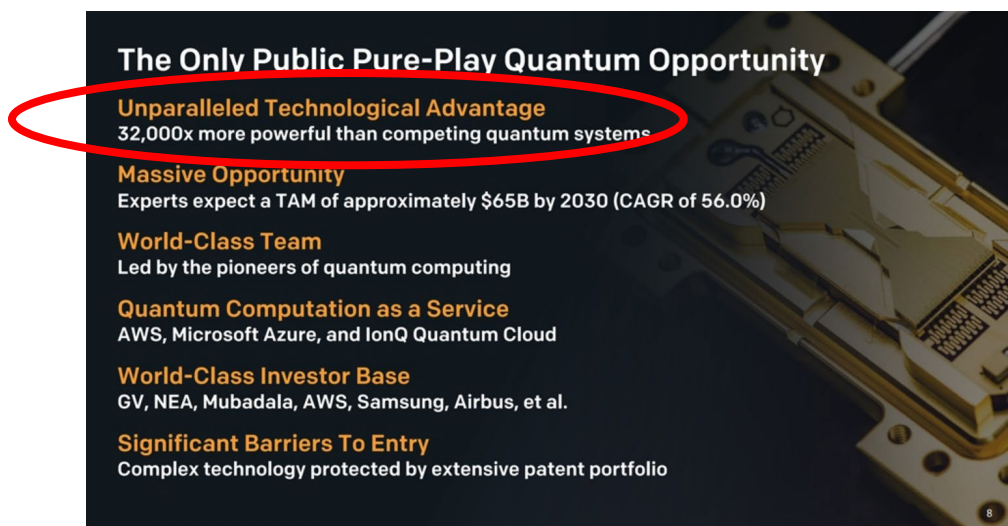
*i. Defendants Misleadingly Touted IonQ's Purported 32 Qubit Quantum Computer With A Quantum Volume of Over "4,000,000"*

81. Defendants' Merger Announcement Release made a number of starry-eyed claims to investors about the future of quantum computing, including that quantum computers have the ability to address how to "live sustainably on our planet," "cure diseases," "efficiently move people and goods," "fight against climate change," and "solve vexing problems from materials design to logistics that impact the transportation industry." The release then emphasized that IonQ was uniquely positioned to fulfill these claims because "IonQ, Inc. is the leader in quantum computing, with a proven track record of innovation and deployment. ***IonQ's 32 qubit quantum computer is the world's most powerful quantum computer***, and IonQ has defined what it believes is the best path forward to scale."

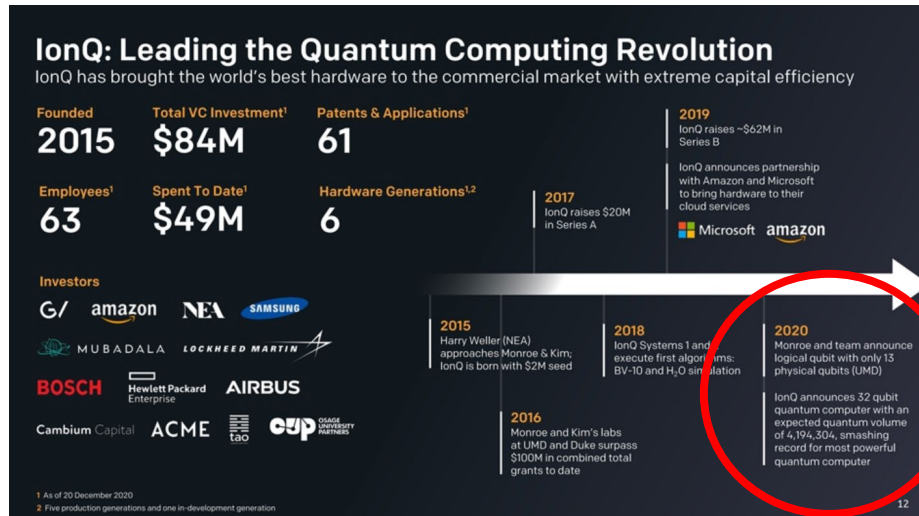
82. The fulcrum of Defendants' effort to convince investors to buy into and approve the Business Combination was IonQ's purported 32 qubit quantum system. For example, in

connection with announcing the Business Combination, on March 8, 2021, IonQ released a “roadshow” presentation in the form of a PowerPoint deck entitled “IonQ: Investor Presentation 20201” (“Roadshow Presentation”) and presentation transcript dated March 7, 2021 (“Roadshow Transcript”).

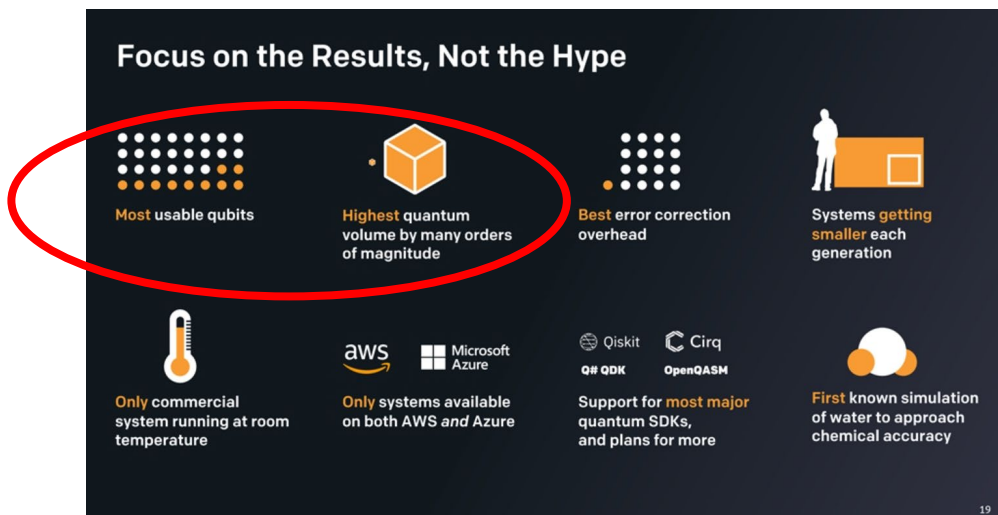
83. Slide 8 of the Roadshow Presentation, titled “The Only Public Pure-Play Quantum Opportunity,” stated *unequivocally* that IonQ had an “Unparalleled Technological Advantage” with a quantum system that was “32,000x more powerful than competing quantum systems.”



84. Similarly, slide 12 of the Roadshow Presentation stated that in 2020, IonQ announced a “32 qubit quantum computer with an expected quantum volume of 4,194,304, smashing the record for most powerful quantum computer.”



85. Slide 19 of the presentation was titled, “Focus on the Results, Not the Hype” and stated that IonQ’s quantum computer had the “*most usable qubits*” and “*highest quantum volume*” Per the Roadshow Transcript, when Defendant Chapman reached Slide 19 of the Roadshow Presentation, he told investors, “On Slide 19, you can see that IonQ is leading in every important aspect of quantum computing, with *the most usable qubits*, the building blocks for quantum computers.”



86. Defendants’ use of IonQ’s purported 32 qubit computer in their promotional blitz for the Business Combination continued into media appearances. For example, on March 9, 2021, Defendant De Masi was interviewed by investment analysis company Benzinga (“Benzinga

Interview”). During the interview, one of the Benzinga interviewers referenced slide 8 of the Roadshow Presentation, referenced above. The interviewer noted that the slide “talks about [IonQ] being 32,000 times more powerful than competitors with the quantum system . . . . Obviously, with your background, you know the technology, you know the systems *and what some of those numbers mean.*” Rather than clarify that IonQ did not have any system 32,000 times more powerful than its competitors’, De Masi *doubled down* and insisted that IonQ’s purported 32 qubit computer was the reason dMY wanted to merge with IonQ:

Look, that is the key slide . . . . *[I]t’s like why we choose this company and IPO?* Well, this slide makes the point. *There are very few technology markets where you know this early on you can say there’s somebody that’s this far ahead of everybody else.* And to be honest, I don’t think there’s going to be anyone that competes with us credibly in the next three, five, seven years because the advantages of getting the customers, getting the revenue, proving this out and getting the capital we provided to continue to drive the lead is going to be really difficult, if not almost impossible, I would argue, to catch up. By the way, *this is the 32 cubit system we’re looking at here.* If we put out the 64 cubit system, the bar chart wouldn’t fit on the page.

87. Similarly, on April 13, 2021, Defendants held an “Analyst Day” during which Defendants presented a PowerPoint slide deck describing IonQ and the Business Combination to investment analysts (“Analyst Presentation”). Defendants also showed Analyst Day attendees a video entitled, “Quantum Landscape,” which left no doubt that Defendants wanted investors to believe that the 32 qubit computer and its power was real, not hypothetical. The video told analysts heard that, while one of IonQ’s competitors, Honeywell, also used trapped ion technology in its quantum computers, unlike Honeywell, “*[t]o date IonQ, by comparison, has a ‘fully connected’ system, where it can create entanglement between any two ions in a chain of up to 32 qubits at any time, with no shuttling or swapping.*” The video also stated unequivocally that “*IonQ’s next generation system has 32 qubits with 99.9% fidelity.*”

88. These and other misrepresentations by Defendants left a strong impression on analysts. A few weeks after Analyst Day, on June 30, 2021, analyst Richard Shannon of Craig-Hallum released a report entitled “Quantum Computer Could Change the World & IONQ Has a Credible Path to be First In This Potential \$100B+ Market. Initiating With a BUY Rating And \$20 Price Target” (“CH Report”). The report used Defendants’ assertions from investor presentations directly to support its “buy” recommendations and \$20 price target—*i.e.*, double the \$10 redemption value of dMY’s securities. For example, the report stated that IonQ had a “*32 qubit computer with expected quantum volume of >4M, well over record for most powerful quantum computer.*” The CH Report even reproduced slide 21 of the Roadshow Presentation, which purported to show IonQ’s massive quantum volume advantage over competing quantum systems, in its entirety.

89. Defendant De Masi was so excited by the CH Report that he tweeted it to his thousands of Twitter followers the following day.

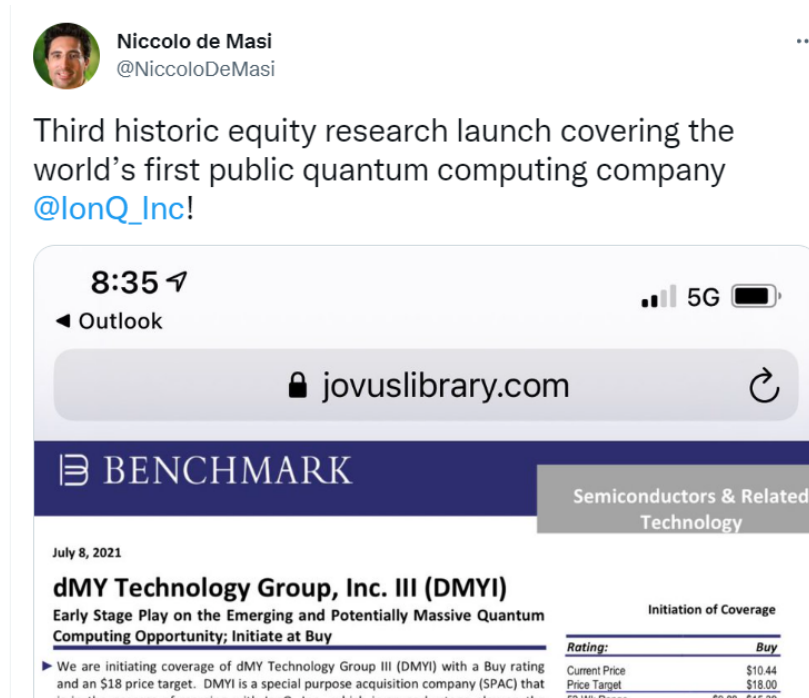


90. Similarly, on July 8, 2021, investment analyst The Benchmark Company, LLC (“Benchmark”) initiated coverage of IonQ with a “Buy” rating and a share price target of \$18—

nearly double the \$10 redemption price of dMY's shares ("Benchmark Report"). Benchmark made its recommendation in part because it believed Defendants' representation that IonQ has "technological advantages that give it a significant lead over the competition in usable qubits, the building blocks of quantum computers, the highest quantum volumes by orders of magnitude, the best error reduction, and the only company with working error correction."

91. In addition, the Benchmark Report highlighted that "***IonQ has shown to be 32,000x more powerful than competing quantum systems*** and with error correction overhead of 16:1 versus competitors at 1000:1 or more" and that the Company had purportedly exceeded 4 million quantum volume. The report also reproduced slides 13 and 21 from the Roadshow Presentation, and emphasized the importance of IonQ's purported 32 qubit machine, writing that "IonQ's most recently announced quantum computer, currently in development, ***uses 32 fully-connected ion qubits, which is the largest number of qubits being used in a trapped-ion quantum computer.***" Benchmark even proclaimed that "***IonQ's 32 qubit quantum computer is the world's most powerful trapped-ion quantum computer.***"

92. As he did with the report from Craig-Hallum, Defendant De Masi tweeted the Benchmark Report to his followers:



93. In the wake of these favorable analyst reports, Defendants continued to tout IonQ's purported 32 qubit quantum computing system to investors as specifically superior to Honeywell's ion trap quantum computing system, which Honeywell had actually demonstrated. On July 15, 2021, Defendants De Masi, Chapman, and Kramer participated in a discussion hosted by research analyst Ruben Roy of WestPark Capital and ICR, Inc., before a remote audience of investors ("ICR Discussion"). During the discussion, an attendee asked Defendants to distinguish IonQ's 32 qubit system from Honeywell's system. Defendant Chapman emphasized that IonQ's system was superior because "you could kind of think of it as the Honeywell system is . . . maybe a good analogy would be *they have a two qubit bus and we have a 32 qubit bus.*"

94. Investors learned that these and many other statements by Defendants were false and misleading on May 3, 2022, when the Scorpion Report disclosed that interviews with former IonQ executives and employees had revealed that the 32 qubit system "*was totally made up,*" "*doesn't exist,*" and IonQ is "*trying to cover up that it's not there.*"



95. One former executive told Scorpion that although he was told when he joined IonQ that the 32 qubit system “was in the next room and it was working,” “it never happened,” it was “bullsh\*t,” and totally fabricated. Scorpion asked the employee whether “it [was] well-known inside the company that there’s no 32-qubit machine right now,” and the executive responded, “Totally.” In addition, when asked “were people uncomfortable with the fact that [IonQ] had pitched [the 32 qubit system],” the executive again responded, “totally.”

96. The Scorpion Report also quoted a former senior scientific IonQ employee who, when asked if the company truthfully said that it had a 32 qubit quantum computer in October 2020, responded, “I would say that is false . . . I do not believe we had it.” The employee went on to say that the claim was nevertheless pushed by IonQ’s founders, Chris Monroe and Jungsang Kim, and Defendant Chapman, and that IonQ’s continued representations about a 32 qubit machine “I do not believe, are consistent with the capabilities they have.”

97. A former executive of IonQ also identified specific false statements in the Roadshow Presentation. The former executive told Scorpion that, “Look at slide 19, they say the most usable qubits, *it’s not true*. ‘Highest quantum volume,’ *not true* . . . There are just so many inaccuracies in what they talk about and what I really have problems with is that they showed in 2021, they’ll have 22 logical qubits . . . *no*. So, it’s just off all over the place . . . and nobody has called them out on where they are today.”

98. After the executive told Scorpion that IonQ was “trying to cover up that [the 32-qubit computer is] not there,” Scorpion asked if he “ever ha[d] a direct conversation with [Defendant] Chapman.” The former executive responded, “oh yeah,” and said that Chapman would say, “We’ll have it one day. We’re working on it.” The former executive went on to tell Scorpion that an employee of a partner of IonQ pulled had pulled the executive aside and said IonQ “is



fraudulent. There are a lot of people in the industry that think it's fraudulent, that the representation of the 32 [qubit machine] is fraudulent . . . . [P]eople would call and say I want to use the 32-qubit machine and they get the runaround. Oh, it's in a test, or it's this. So, nobody's ever seen it."

99. The former executive continued that IonQ is "caught in this corner because it's not 32 qubit 4.2 quantum volume. And so, they're really stuck. The question is whether someone's going to call them out and say you announced it two years ago. Nobody's called them out. And they just continue to lie. Peter [Chapman] just lies. There's very little that he says that's the truth."

100. The Scorpion Report further disclosed "extreme discomfort among IonQ's staff and an 'unprecedented amount of pushback' as its leadership allegedly pushed for a fake product announcement with 'outlandish claims' that 'are so far removed from reality,' with 'essentially every scientist' at the company opposed and 'flipping out.'" A former IonQ physicist told Scorpion that "Peter [Chapman] sows all this hype in the community and in the public, and it upsets the scientists at the company" The physicist described further how Chapman "makes the scientists very uncomfortable. The time scales for something like that are just so much longer off. He had a talk a couple of years ago or a year ago where he talked about these rack-mounted computers at server farms . . . . And that really made people pretty uncomfortable."

101. The Scorpion Report also revealed that Defendant Chapman's and De Masi's statements about "4 million quantum volume" were fantasy. According to a quantum computing researcher who had published papers with IonQ's Founders, Defendant Chapman:

came into the discussion and said that the quantum volume of their machine is 4 million. And the gap between a few hundred and 4 million is so huge that you just don't say such things if you have any basic understanding whatsoever of the meaning of what you're saying. Because if you're saying that the quantum volume of your machine is 4 million, then it is far, far more advanced than that of the competitors. And it was obvious that it is not true to everybody.

102. The Scorpion Report further quoted a former senior scientific employee of IonQ who stated that IonQ's assurances about an "expected quantum volume of 4 million" were inaccurate and met with substantial resistance within the Company. After telling Scorpion that "I do not believe you will find a client that has access to the machine that actually has 32 qubits with 4 million quantum volume" as IonQ had promised, Scorpion asked the former senior scientific employee, "[w]as there disagreement or pushback in the company before this took place?" The former employee replied, "There was. Certainly, I would say, an unprecedented amount of pushback, especially by the scientists who are building the systems, who have built the systems, unlike some of these founders who've been professors long enough to not know what actually goes in the lab, as you can imagine."

103. CW1, IonQ's former Vice President of Business Development, who spoke to Plaintiffs as a confidential witness, confirmed that the Company's purported 32-qubit computer did not exist, and that it did not exist when Legacy IonQ announced it in October 2020 and still did not exist after CW1 left IonQ in November 2021.

104. CW1 learned that no 32-qubit computer existed shortly after joining IonQ in October 2020. CW1 stated that after asking colleagues about the 32-qubit computer, he could never get a straight answer. CW1 then went to IonQ's scientists, "and they were all like, 'Nope.'" CW1 further stated that "There was an executive team and then there was a scientific team and when I went to the scientists and said, 'Where's the 32-qubit device?' they were like 'what?'" CW1 stated that employees at the company, including himself, were concerned about the announcement of the 32-qubit computer because that system didn't actually exist.

105. CW1 also confirmed that Chapman's statements about the 4,000,000 quantum volume of IonQ's machine were also "***not true***" because "***[t]he computer doesn't exist.***" "What

has happened,” “CW1 said, “is they have said that was the quantum volume but it was a calculated quantum volume. Then they said, ‘We’re not going to use quantum volume.’ Now they’re saying, ‘We’re only using calculated quantum volume. We’re not going to do it out of actual data.’ Part of what I think about, which scientists think about, is data so for me to go to someone and say, ‘This is calculated [and] doesn’t carry a lot of water.’”

106. Additional evidence corroborates the Scorpion Report’s revelation that IonQ’s 32 qubit quantum computing system did not exist. For example, during the ICR Discussion, Defendant Chapman was asked when the 32 qubit computer would be available, *i.e.*, when IonQ would demonstrate its capabilities, as Honeywell and other competitors had. Defendant Chapman responded, “We don’t yet have an exact deadline for the 32. ***We put our first customers onto the 32 in June [2021], which was on private.***” Chapman reiterated this approximately a week later, on July 23, 2021, during an interview with Benzinga. When the Benzinga interviewer asked “a lot of people want to know when will the 32 cubit computer be available to cloud users for Microsoft, Amazon and Google?” Chapman replied that “[w]e just put our first two customers onto the new system in June . . . . I think we were also looking at building more of those systems because the demand seems to be pretty high.”

107. The results of those customers’ interactions with IonQ’s purported 32 qubit computer system were published on September 21, 2021, in a paper entitled, “Low Depth Amplitude Estimation On a Trapped Ion Quantum Computer” (“IonQ Paper”). Although the paper stated that researchers had been working with “the newest generation IonQ quantum processing unit,” *i.e.*, the supposed 32 qubit machine, it did not appear that participants had ever seen the 32 qubit machine. Scorpion spoke with an executive of QC Ware, a partner of IonQ whose employees were listed as co-authors of the IonQ Paper. The executive stated that “IonQ ‘kept referring’ to the

machine used in the paper ‘as the 32-quibt machine, blah-blah-blah’ but the experiments only used four qubits and ‘[t]hey keep talking about it, this machine but that’s in the lab. It’s behind closed doors.’’ The second-to-last paragraph of the IonQ Paper corroborates the QC Ware executive’s account, and states that researchers were only allowed to run experiments on *four qubits*, nowhere near the number of qubits Defendants had touted comprised the system.

ii. *Defendants Misleadingly Touted IonQ’s Miniaturization of Its Quantum Computing Systems*


108. Defendants’ efforts to induce investors to approve the Business Combination and prop up IonQ’s share price up until the lock-up period expired and Defendants were able to sell their shares were not limited to misrepresentations concerning the Company’s purported 32 bit quantum computing machine. Defendants also took pains to emphasize that IonQ had because of its progress in reducing the size of its computers, *i.e.*, “miniaturizing” them.

109. Defendant De Masi began the Roadshow Presentation by touting to investors that IonQ had an advantage over competitors because it already had the ability to manufacture and miniaturize its quantum computers. Among other things, Defendant De Masi told investors, “IonQ’s technology is *uniquely easy to manufacture*. In addition to cloud revenue, *this manufacture ability of miniaturization advantages* mean that IonQ will have the option of selling complete systems to governments and other large counterparties.” In all, Defendant De Masi said, “IonQ *has a tremendous lead over other quantum players*.”


110. Defendant Chapman reiterated this point later in the Road Show presentation, when he reached slide 24, titled “***IonQ’s Leading Modular Architecture: Each Generation of IonQ Hardware is Getting Smaller & Cheaper to Build.***” Slide 24 compared the size of IBM and Google’s purported quantum hardware, which appeared to be six feet and 20 feet wide,

respectively, with an IonQ ion trap and vacuum chamber package that appeared to be only two inches wide.


**IonQ's Leading Modular Architecture** Phase III  
Each Generation of IonQ Hardware is Getting Smaller & Cheaper to Build

An IBM engineer working on the custom-built dilution refrigerator casing for a single QPU




Google rendering of a planned million-physical-qubit system




IonQ ion trap and vacuum chamber in a single, minuscule package <sup>1</sup>

<sup>1</sup> The package pictured is a prototype developed at IonQ founder Jungsang Kim's Duke University lab.


24

111. After showing this slide, Defendant Chapman drove the point home, telling investors, “[f]or quantum to win, the systems need to shrink, and the cost per qubit must shrink as well, and IonQ is well-poised to win this phase too.”

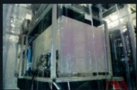
112. Defendant Chapman also walked through Slide 26 of the Road Show presentation, which displayed a series of quantum computing systems of decreasing size:

**Smaller Every Generation: Complete System** Phase III

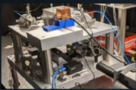
**2016**  
Lab Scale <sup>1</sup>




**2020**  
Tabletop




**2021**  
Benchtop <sup>2</sup>



**2023**  
Rackmount <sup>3</sup>





<sup>1</sup> The system pictured is an early trapped ion system from IonQ founder Chris Monroe's UMD lab.  
<sup>2</sup> The system pictured is a prototype developed at IonQ founder Jungsang Kim's Duke University lab.  
<sup>3</sup> Illustrative rendering of a potential form factor for rackmount QPU, not a designed system.

26

113. Defendant Chapman described this slide by saying, “On Slide 26, you can see the evolution of our quantum computer. The 2020 systems are the 11 qubit system found on Amazon and Microsoft. The 2021 system is a prototype system at Jungsang’s lab at Duke, now getting to less than a square foot. And our goal is, by 2023, ***to build a relatively low-cost rack mounted, room temperature system.***”

114. These representations, and others like them, also left an impression on analysts. The Benchmark Report, for example, initiated coverage of IonQ with a “Buy” rating, in part because of the Company’s “unique trapped ion hardware technology approach that provides scalability, ***miniaturization and manufacturing benefits***” that “***gives [IonQ] a technological advantage and significant lead over competing quantum approaches,***” and because IonQ “has built six generations of quantum computers over the last five years based on its leading ion trap technology ***where each generation of hardware is smaller and cheaper to build.***”

115. Defendants continued to point to IonQ’s purported ability to miniaturize its quantum systems as a competitive advantage as the time for investors to approve the Business Combination approached. For example, during the IPO Edge Chat on September 15, 2021, Defendant De Masi differentiated IonQ’s systems based on their size. In response to a comment from an attendee questioning the Company’s ability to miniaturize its systems, Defendant De Masi responded, “we know how to shrink these things down to the point where we can put them in racks. So, it is a bit of a wives tale [sic] that says that ion traps have a problem at scaling. When in fact, ***actually the competition, with these huge devices are looking at building quantum computers that will be the size of a building or a football field . . . today [ion traps are] down to the size of about a half dollar.***”

116. The Scorpion Report revealed that these and other statements were also materially misleading as well. While Defendants showed investors photos of miniaturized devices that it claimed the Company could easily reproduce, the Scorpion Report reported based on conversations with former employees and photos, that the Company's quantum device was "a primitive skunkworks contraption that one can't take 'out of the lab for real use,' resembling an explosion of 'spaghetti' with electromechanical parts, lasers, cables, HVAC equipment, racks of screwdrivers, and multiple chassis that ex-employees indicated are 'garage size' or the size of a 'small adult elephant.'"

117. The Scorpion Report further revealed that while Defendants were predicting a server rack-sized (*i.e.*, 19-inch wide) computer by 2023 and a desktop-size quantum computer by 2025, multiple ex-employees called these promises "complete bullsh\*t," "completely outrageous," and "bottom line ridiculous" given that IonQ's computer was massive and the Company had absolutely no hope of reducing its size in the near term.

118. For example, a former senior technical IonQ employee told Scorpion that IonQ's computer was "about a small adult elephant in size and that's not surprising because you have a lot of equipment. You have lasers; you have optical systems; you have a vacuum chamber; you have an electronic system." Another former member of IonQ's technical staff told Scorpion that the Company's quantum computer was "probably twice the height of me, I imagine or maybe one-and-a-half. I'm 5'10." Similarly, a leading quantum computing researcher who has published papers with IonQ's founders told Scorpion that the computer was "the size of a car plus a table with a desktop where it's like a classical computer that is plugged in to control all of the quantum hardware. So, it's like a car plus a separate chair and a computer desk with a classical computer

on it.” CW1 corroborated these former IonQ employees’ characterizations of the computer, estimating that it was approximately the size of an SUV.

119. When asked about photos of a “2021 Mini Package” on slide 24 of the Roadshow Presentation, a former IonQ physicist told Scorpion, “I don’t think they have any machines currently developed” with the two-inch vacuum chamber and ion trap, and went on “[t]he ones now are about probably like a cubic foot of volume. So, they’re much, much bigger.”

120. The Scorpion Report also revealed that IonQ’s statements about its ability to quickly miniaturize its quantum computers were false, and quoted multiple ex-employees as stating creating a small data center device by 2023 and a desktop device by 2022 were “completely outrageous” and “bottom line ridiculous,” *i.e.*, patently false. For example, a former member of IonQ’s technical staff stated that:

I cannot imagine a scenario *in the next 10 years* where you are shipping a box in any way like a PC terminal. ***There’s just no way.*** Not only do you need technicians, but you need a Ph.D., post-doc quantum physicist as your technician, and you would need them there all the time. Yeah, like 24/7. I think some companies, maybe IonQ, they talk about boxing it up and shipping it and selling it places. But to me, that’s completely outrageous, at least in the current state. That [the CEO’s comments on a rack-sized box by 2023] to me, that seems totally absurd; just hearing it, it seems absurd to me.

121. Similarly, a former physicist at IonQ said that Chapman’s statements that the IonQ could have a “rack-mounted” sized quantum computer were “complete bullsh\*t,” while a former IonQ senior technical employee said that the statement was “bottom-line ridiculous,” and a former IonQ executive said, “[t]hey talked about is in two years that they’re going to have a data center-sized device. ***They’re nowhere near that. It’s just baloney. You don’t go from the big behemoth to a rack in the data center in two years; you just don’t.***”

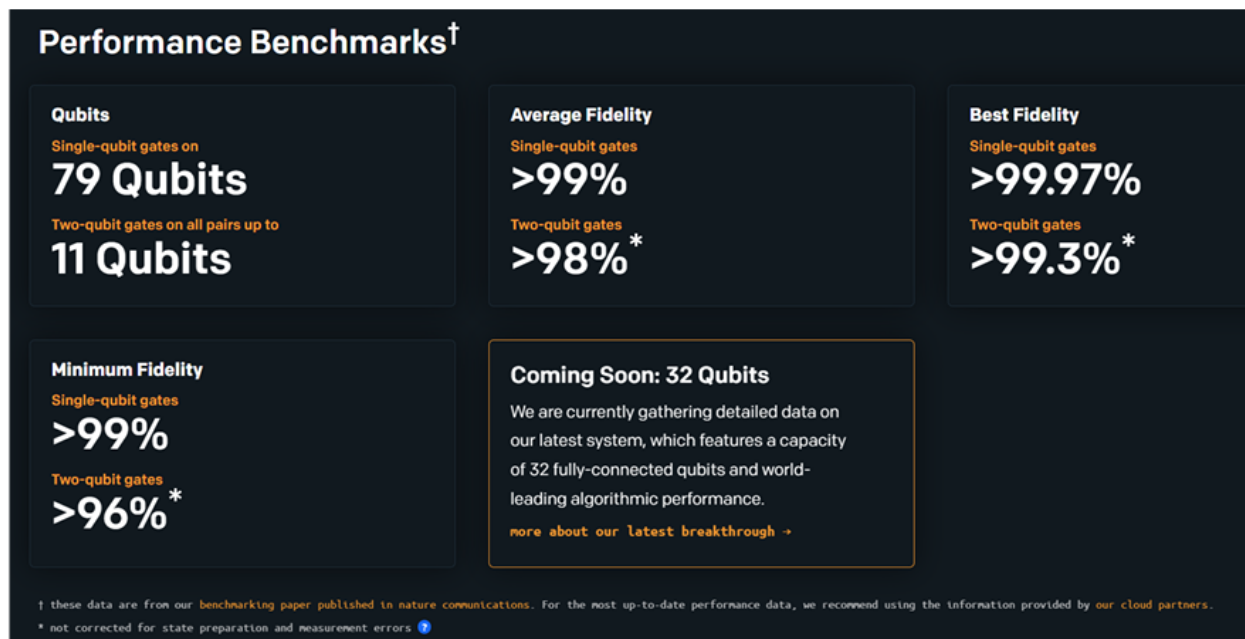


122. CW1 corroborated that the Scorpion Report’s allegations that it was impossible for IonQ to have a rack-sized quantum computer by 2023, stating that IonQ, and Defendant Chapman specifically, “didn’t even have a roadmap for building a small device.”

iii. *Defendants Misleadingly Tout IonQ’s Error Fidelity and Error Correction Capabilities*

123. Defendants also pushed investors to invest in IonQ and approve the Business Combination because the Company’s low error rates for its 11 qubit machine and promises of error correction using orders of magnitude fewer qubits.

124. During the Class Period, for example, IonQ’s website touted to investors that the Company’s **average** fidelity for its 11 qubit machine was >98% to >99%, depending on whether the system was using single or two-qubit gates:



125. The Scorpion Report, however, revealed IonQ’s error rates were much worse than Defendants suggested. As an initial matter, a former IonQ physicist told Scorpion that “we don’t really see useful applications start coming about and reliable computers until we have four nines, 99.99% fidelity.” While, “[y]ou might think 96%, 98%, 99% is not that far from 99.9%,” but

“getting that last few percent or that last few tenths of a percent or hundreds of a percent is really where the outstanding challenge lies. It’s way harder to get from 99.3% to 99.99% than to get from 50% to 99.3%. 99.3%.”

126. A former member of IonQ’s technical staff told Scorpion that 98% fidelity, or a 2% error rate, meant that a computer was useless. “It’s a chain process where each previous error will compound . . . it’s like a game of telephone. If you are transferring between 10 people and there’s a 2% error rate, it’d be like a whole sentence, maybe one letter is off and by the time you get to the end.” The former IonQ physicist corroborated this, stating that “if your error scales such that every repeated step accumulates the error from the previous step, then you have 98% error. That means that if you performed 50 operations, your chances of getting “the right answer” diminish very, very quickly It’s a little less straightforward than that when you talk about quantum . . . . You basically lose any kind of coherence to your operations...your entire computation breaks down after a few steps.” In other words, while Defendants’ website suggested that 98%-99% fidelity was something to celebrate, a quantum computing system with that error rate was not functional.

127. The Scorpion Report also disclosed that, according to an executive of IonQ partner QCWare, IonQ’s computers were only accurate 70% of the time, *i.e.*, ***had an error rate of 30%***. Scorpion also directly corroborated that error rates for IonQ’s 11 qubit computer were likely wildly inflated. When Scorpion accessed the 11 qubit computer via the AWS cloud and asked it to add “1+1,” it returned the correct answer only 59% to 70% of the time. The firm also conducted an experiment asking the computer to add “2+3,” and found that the computer only returned the correct answer 50% of the time. The results from each process were far below the fidelities touted by IonQ.

128. Throughout the Class Period, Defendants boasted about the superiority of IonQ's error correction abilities in its NISQ systems. For example, slide 23 of the Roadshow Presentation indicated that IonQ's ion trap system could correct an error using only 16 qubits of power, while its competitors' modalities (*i.e.*, quantum computing systems) would need 1,000 to 1 million qubits of computing power to correct an error:



129. These representations were also repeated in the Registration Statement and the Proxy, which touted to investors that “[b]ecause the ion qubits feature very low idle and native error rates and are highly connected, IonQ expects the error-correction overhead to be about 16:1 to achieve the first useful quantum applications. This contrasts with other approaches, for which IonQ estimates the overhead to be in the range of 1,000:1 to 100,000:1.”

130. These statements were so powerful that analysts repeated them to investors as well. The Benchmark Report, for example, highlighted that “IonQ has shown to be 32,000x more powerful than competing quantum systems and *with error correction overhead of 16:1 versus competitors at 1000:1 or more.*”

131. These and other statements by Defendants about IonQ's error correction capabilities were misleading, however, because Defendants knew, but did not disclose, that while

their estimate of 16 qubits to correct one error referred to IonQ's *current NISQ-A technology*, their estimate of 1,000 to 1 million qubits for their competitors to correct an error referred to qubits necessary to correct errors in their competitors' *earlier-phase, more rudimentary NISQ machine*. In addition, as both IonQ and its competitors developed useful FTQC machines, the difference in error correction would be substantially narrower than 16:1 versus 1,000 or 1 million:1. While Defendants communicated to investors that IonQ had a massive competitive advantage in error correction based on an apples-to-apples comparison of quantum computing techniques, these representations were untrue, false, and misleading because they did not reflect an apples-to-apples comparison, *i.e.*, a comparison of machines in different states of development.

*iv. Defendants Misleadingly Touted IonQ's Contract Bookings*

132. Throughout the Class Period, Defendants emphasized to investors that its business model involved "customers" paying to access its quantum computers in the cloud. Defendants claimed that IonQ earned revenues by customers, who could be Fortune 500 companies, government entities, or even individual programmers, to use IonQ's quantum computers. These interactions, Defendants asserted, produced revenue on their own and increased the likelihood that customers eventually would purchase fully operational quantum computers from IonQ.

133. For example, during the Benzinga Interview, Defendant De Masi touted to investors, "the rise of cloud computing has fundamentally changed the ability of IonQ to drive real revenue in the next three or four years, even before the truly powerful world changing machine comes online." De Masi explained, "[t]he reason for that is, Amazon, Google, Microsoft, we just have to connect to them and *they have customers and they have an efficient path to market for us and an efficient revenue share model for IonQ.*" Moments later, De Masi reiterated, "remember there's two big sources of revenue. So *you have cloud revenues that are going to*

*grow*, I think, quite nicely and quite smoothly. And then *you're going to have system sales that can come on top of that.*"

134. In addition, Registration Statement and Proxy emphasized that the Company derived its revenues from cloud providers. For example, the Registration Statement and Proxy stated that "IonQ's business *is currently dependent upon its relationship with its cloud providers*. There are no assurances that IonQ will be able to commercialize quantum computers from its relationships with cloud providers." These filings further advised that "Cloud computing partnerships could be terminated, or not scale as anticipated, or even at all. IonQ currently offers its [11 qubit quantum computing system] *on public clouds provided by AWS and Azure.*"

135. By September 2021, as the date for investor approval and closing of the Business Combination approached, Defendants were desperate to find a way to convince investors of the strength of IonQ's current and future fiscal condition.

136. On September 8, 2021, Defendants announced a partnership between IonQ and the University of Maryland ("UMD"), which had been closely intertwined with the Company since its inception, whereby UMD would invest \$20 million to create the National Quantum Lab at Maryland ("Q-Lab"), where "UMD-affiliated students, faculty, researchers, staff and partners across the country" could use IonQ's quantum computing systems and collaborate with IonQ scientists and engineers.

137. The next day, on September 9, 2021, three weeks before investors would vote on the Business Combination and the merger would close, Defendants issued a press release announcing that IonQ was "tripling its expectation for 2021 total contract bookings from its previously announced target of \$5 million to \$15 million." ("Bookings Release").

138. The Bookings Release did not attribute any of the \$15 million in now-expected contract bookings to the partnership with UMD to create the Q-Lab, even though the Q-Lab partnership was responsible for virtually all the Company's newly estimated bookings. Instead, in the Bookings Release and in subsequent communications during the Class Period, before and after the Business Combination closed, Defendants consistently communicated to investors that the tripling of contract bookings was the result of demand for quantum technology generally, and IonQ's technology specifically, from a variety of customers—*i.e.*, cloud-based customers.

139. These communications were materially misleading because Defendants knew that investors would not be impressed by an additional contribution of funds from an academic institution that was a long-time IonQ partner and had employed an IonQ founder as a professor. Defendants' statements created the false impression that IONQ's newfound bookings were from private enterprises and/or government entities when, in fact, they were not. Rather than reveal the truth—that a related party had propped up IonQ's bookings with the equivalent of a large cash infusion because IonQ's customers were not paying for computing time—Defendants made a series of misleading disclosures designed to mislead investors about the customers who drove the tripling of the Company's contract bookings.

140. For example, Defendants relentlessly promoted its purported "tripling of bookings" in the days leading up to the September 28, 2021 shareholder vote to approve the Business Combination. At the IPO Edge Chat, on September 14, 2021, Defendant De Masi touted, "***The quantum era has clearly arrived. How do I know this? Well, last week IonQ tripled bookings guidance for 2021.***" Defendant De Masi continued, "I really can't emphasize enough what an outstanding achievement this is not only technologically, but also for Peter and Thomas as the CEO and CFO. ***I don't know a lot of IPO's or companies in general that have literally increased***

*in the middle of the year*, the revenue, effectively monetization proxy by 200%, and it's still only September . . . . If that doesn't prove the quantum era is here, I'm not sure what does."

141. As the IPO Edge Chat continued, Defendant De Masi hammered home the point that IonQ's tripling of bookings was a reflection of IonQ's ability to deliver quantum computing to the market *at large*, not academic institutions that had been the Company's long-time benefactors. Defendant De Masi touted, "We are saying, we've said, that *we are going to deliver 2022, a year early*," and there was "some real chance that *in 2021, we might beat 2022 numbers*. That's just an astonishing achievement. Right? *That is only happening because of the fact that the quantum era has arrived. It's led by IonQ.*"

142. Later in the IPO Edge chat, one of the interviewers asked Defendant Kramer, "[a] big milestone was just announced the other day regarding contract bookings. Niccolo [De Masi] mentioned that. Tell us a bit more about that as well." Defendant Kramer did not clarify that the increase in contract bookings was from a related party transaction with an academic institution. Instead, Defendant Kramer attributed it to contracts with customers through the cloud, saying "[w]e announced at the early, this must have been in late March, that *we are anticipating \$5 million in economic value generated from contracts in cloud* for this year 2021. And only last week, we announced that *we will raise this guidance target to three times [] five. And we now anticipate coming in at \$15 million by year end.*" When Defendant Kramer discussed the Q-Lab during the interview, he characterized the lab as a separate project designed to educate future quantum programmers: "We partnered with UMD, University of Maryland, to set up a quantum lab where academics, researchers, and other people affiliated with the university can come in, and use our machines to program and *learn how to do quantum computing*. And as such, UMD will also start *delivering the finest quantum engineers*, which will be in high demand." When



Defendant Kramer was asked about IonQ’s “robust partnership model,” he did not mention the University of Maryland, but instead pointed to Amazon and Microsoft.

143. Defendants’ touting of the Company’s purported tripling of contract bookings continued almost daily in the run-up to the shareholder vote on the Business Combination. On September 20, 2021, the Company held a conference call with investors to discuss IonQ’s purported results and achievements since the first quarter of 2021 (“September Investor Update Call”). During that call, Defendant Kramer boasted to investors that:

Earlier this month, we announced that *we were on track to significantly exceed our previously announced 2021 bookings target of \$5 million, and instead expect to end up at \$15 million for the full year.* This is a powerful demonstration of the results of our commercialization efforts, and that *real quantum cases are here*, right now. While we are still in early days, *there is already tangible demand for quantum computing power*, and we believe this is just the beginning of our monetization story.

144. After the Business Combination closed, Defendants continued to tout this “tripling of bookings” to investors. On November 15, 2021, Defendants issued a press release announcing the Company’s financial performance for the third quarter of 2021 (“Q3 2021”). The release highlighted that bookings had reached over \$15 million (*i.e.*, tripled), and attributed the increase to cloud-based access to the Company’s computers, telling investors that “IonQ’s bookings results *demonstrate the Company’s leadership and growing demand for IonQ’s industry-leading trapped-ion hardware.* IonQ is the only maker of quantum hardware that is available through every major cloud provider in the United States, which includes Amazon Web Services, Microsoft Azure, and Google Cloud. *This gives public and private sectors unprecedented access to the Company’s technology.*”

145. Also on November 15, 2021, Defendants held a conference call with investors to discuss IonQ’s Q3 2021 performance. During that call, Defendant Chapman touted, “[w]e are



*proud to announce that we've tripled our bookings expectations for fiscal year 2021.*" After advising investors that "[t]his past quarter, [IonQ] announced partnerships and collaborations with world class companies, including Goldman Sachs, Fidelity Center for Applied Technology, Accenture and GE Research, as well as with educational institute [sic] like the University of Maryland," Defendant Kramer reiterated that "I am happy to announce that as of the end of Q3, our total bookings for the year have already exceeded our increased expectations for the full year ending up at \$15.1 million." Defendant Kramer attributed the increase in bookings (from \$5 million to \$15.1 million) to "the promise our *customers* see in our platform, and resulted from *customers* buying more and also earlier than we had expected."

146. During the call, Analyst Katy Huberty with Morgan Stanley pointedly asked, "about the bookings and mix of bookings year-to-date, what can you tell us about *the number of customers or deals* within that [\$15] million of bookings, and about *the mix of customers and use cases* that you've seen this year?" Defendant Chapman did not disclose that the increase in bookings had come from UMD. Instead, he told Huberty, "[w]hat we have seen to date is that *we've seen thousands of customers running projects on our machines*," "[w]e continue to see a mix of customers coming in through our public cloud where we actually don't know who all the customers are," and "we have customers on a private cloud as well." Defendant Chapman concluded by emphatically refusing to identify customers behind the bookings, stating "[w]e are to date not going to break out the individual customer names because many of these actually covered by confidentiality process," even though the Company had already announced the partnership to create the Q-Lab with UMD.

147. Also during the call, Craig-Hallum analyst Richard Shannon asked, "I think you had a small number of contracts that provided most of the upside to your, your 2021 number here.

Can you give us a sense of what you're looking at in terms of the bookings pipeline today?" Rather than disclose that the bookings were almost entirely from UMD in connection with the Q-Lab, Defendant Kramer emphasized that they came from multiple customers. Defendant Kramer said, "So we have been busily talking to potential customers and partners for probably two years now. And it's only been recently that we've been able to come to the market with an actual product that we can sell. And what we have seen is that *the reception in the market was larger and faster than we had anticipated.*"

148. Once again, it was the Scorpion Report that revealed that the tripling of bookings had come from UMD, not IonQ's enterprise or government customers. The Scorpion Report first observed that IonQ's Q3 2021 10-Q disclosed a related party transaction between UMD and IonQ for \$14 million, or essentially all of the Company's "contract bookings" for 2021.

149. The Scorpion Report then confirmed that the IonQ's "tripling of contract" bookings only three weeks before investors voted to approve the Business Combination was from the Q-Lab partnership with UMD because virtually none of IonQ's major customers were paying to access the Company's quantum computing systems. According to the Scorpion report, an executive of QCWare, a partner of IonQ, stated that "there's no money involved in the current partnership we have . . . . [W]e bring the customer to you, IonQ, to run this, and so, you, IonQ, benefit by running this experiment and getting your name associated with the customer like a Goldman Sachs. That's the kind of customers we would bring to them. And therefore, there's no money changing hands between QC Ware or IonQ in this partnership." An executive of Multiverse Computing, another IonQ partner, told Scorpion that Multiverse Computing was not a paying customer, and that the arrangement was "a free partnership." That executive also told Scorpion that none of the four

customers Multiverse referred to IonQ were paying for access. When asked directly, “they’re all basically getting it for free?” the executive answered, “[r]ight now, yes.”

150. Analysts naturally confronted Defendants about the source of their bookings in the wake of the Scorpion Report. Rather than come clean, however, Defendants continued to conceal the source of their bookings. On May 16, 2022, two weeks after the Scorpion Report was released, Defendants participated in a call with analysts and investors to discuss the Company’s performance for the first quarter of 2022. During that call, likely spurred by the revelations in the Scorpion Report, analyst David Williams from Benchmark pointedly asked Defendants “can you kind of help us parse out your customers in terms of those that are more commercial versus academic and research driven? How much of your revenue, or how much -- maybe your bookings are driven by beyond maybe the academic world?” Rather than come clean and admit that the Company’s prior bookings had been spurred by the long-term relationship with UMD, Defendant Chapman dissembled:

See, *we have a wide kind of range of different customers*. It’s a good spread. *Some of it, to be honest comes from cloud companies and we don’t know exactly how customers are using it*. So there’s kind of a wildcard there, if you will. Anecdotally, we see things out on the Internet, where students are using the quantum computers to do their quantum homework, professors are using the quantum computers -- our quantum computers to teach classes and make YouTube videos. And then *you have companies, large and large companies that are doing early work on these in producing scientific papers. So you know, it is kind of a mixture of all of them*. I’m not sure that I even would be able to be honest to generate an exact kind of breakdown, because we don’t have full transparency into sometimes what the cloud companies, what their users are.

#### **D. The Business Combination Closes**

151. On September 28, 2021, and in reliance on misrepresentations Defendants made throughout the Class Period, the overwhelming majority of eligible dMY shareholders voted to approve the Business Combination. In addition, although dMY shareholders at the time of closing

could have redeemed their dMY shares for \$10 per share, pursuant to the terms of their investment in dMY, investors were precluded from exercising their right to seek redemption of their dMY shares prior to the Merger on a fully informed basis and were induced to vote their shares and accept inadequate consideration in connection with the Business Combination, because the Proxy falsely and misleadingly asserted that IonQ had a 32 qubit quantum computing system, the miniaturization of its systems gave it an advantage over its competition, the Company had superior fidelities and error correction, and the Company had “tripled its bookings” based on interest from a wide variety of enterprise and government cloud-based customers.

152. As of November 18, 2022, IonQ’s shares were trading at \$4.92 per share. In other words, at least in substantial part because of Defendants’ misrepresentations, investors voting to approve the Business Combination and not redeeming their shares had lost over half what they could have obtained had they redeemed their shares.

153. As part of the Business Combination, the “sponsor,” of which Defendant De Masi was a member and Defendant You was a manager, received over 7.5 million “founders’ shares.” Although the sponsor had purchased the founders’ shares for only \$25,000, within a month of the closing of the Business Combination the shares were worth approximately ***\$117,450,000 million***. By November 17, 2021, only six weeks after the Business Combination closed, the value of the shares had ballooned to ***\$232.5 million***.

154. Following completion of the business combination with dMY, IonQ began trading publicly on October 1, 2021, and the Company reaped gross proceeds of \$350 million from the PIPE Investment. As a result of Defendants’ false and misleading statements and omissions about the Company’s management, business operations and financial prospects during the Class Period,

the price of IonQ's securities traded at artificially inflated prices, with the Class A common stock alone reaching a Class Period high of more than \$31 per share on November 16, 2021.

**DEFENDANTS' MATERIALLY FALSE AND MISLEADING STATEMENTS  
DURING THE CLASS PERIOD**

155. Throughout the Class Period, Defendants made materially false and/or misleading statements, as well as failed to disclose material adverse facts about the IonQ's business, operations, and prospects. Specifically, Defendants failed to disclose to investors: that (1) IonQ did not have a 32-qubit quantum computing system; (2) its quantum computing system was nowhere near miniaturization; (3) it was misrepresenting its systems' fidelity and error correction capabilities; and (4) a sudden 300% increase in "contract bookings" was solely attributable to a related party transaction with the Company's longstanding benefactor UMD. When the truth underlying each of the misleading statements set forth below was revealed to investors, the price of IonQ securities plummeted.

**A. Misrepresentations Concerning IonQ's Purported 32 Qubit Quantum Computer**

156. Throughout the Class Period, Defendants represented that IonQ had a 32 qubit quantum computing system with an expected quantum volume in excess of 4 million. These representations were false and misleading when made, however, because Defendants knew, but did not disclose, that IonQ did not have a 32 qubit quantum computing system, let alone a system with over 4 million quantum volume.

157. The Registration Statement, the Proxy, and the Q3 2021 10-Q, and 2021 10-K all stated that "***IonQ's 32-qubit system, which is an important milestone for IonQ's technical roadmap and commercialization, is not yet available for customers and may never be available.***" These filings further advised that "***IonQ is developing its next-generation 32-qubit quantum computer system, which has not yet been made available to customers.***"

158. In addition, each of the Merger Announcement Release, Announcement Video, Roadshow Presentation, Analyst Presentation, Bookings Release, and September Presentation, all expressly represented to investors as a factual matter that IonQ possessed a 32 qubit quantum computer, stating unequivocally that “IonQ, Inc. is the leader in quantum computing, with a proven track record of innovation and deployment. ***IonQ’s 32 qubit quantum computer is the world’s most powerful quantum computer.***”

159. The statements in paragraphs 157-58 above communicated to investors that IonQ had an existing 32 qubit quantum computing system. This statement was false and misleading, however, because at the time these statements were made, IonQ did ***not*** have a 32 qubit computer, as explained above. *See* Substantive Allegations § C.i.

160. On March 8, 2021, IonQ released the Roadshow Presentation and Roadshow Transcript introducing the Business Combination. The Roadshow Presentation was made available to investors on the dMY and Legacy IonQ websites, and Defendants also filed the deck and Roadshow Transcript with the SEC as exhibits to a current report on Form 8-K.

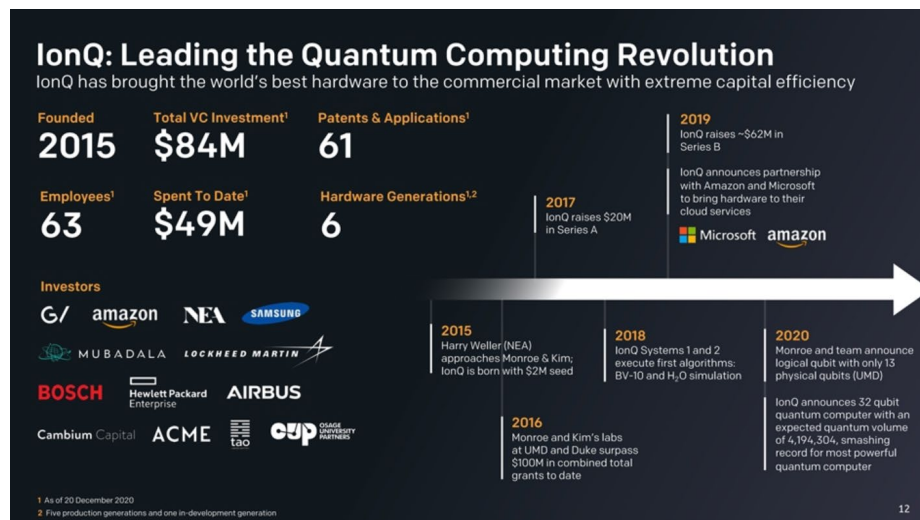
161. Slide 8 of the Roadshow Presentation was titled “The Only Public Pure-Play Quantum Opportunity.” Immediately following the title, the slide stated unequivocally that IonQ had an “Unparalleled Technological Advantage” with quantum computers that were “32,000x more powerful than competing quantum systems.”



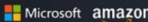
**The Only Public Pure-Play Quantum Opportunity**

- Unparalleled Technological Advantage**  
32,000x more powerful than competing quantum systems
- Massive Opportunity**  
Experts expect a TAM of approximately \$65B by 2030 (CAGR of 56.0%)
- World-Class Team**  
Led by the pioneers of quantum computing
- Quantum Computation as a Service**  
AWS, Microsoft Azure, and IonQ Quantum Cloud
- World-Class Investor Base**  
GV, NEA, Mubadala, AWS, Samsung, Airbus, et al.
- Significant Barriers To Entry**  
Complex technology protected by extensive patent portfolio

162. Slide 12 of the Roadshow Presentation was titled, “IonQ: Leading the Quantum Computing Revolution” and stated that in 2020, IonQ announced a “32 qubit quantum computer with an expected quantum volume of 4,194,304, smashing the record for most powerful quantum computer.”



**IonQ: Leading the Quantum Computing Revolution**  
IonQ has brought the world's best hardware to the commercial market with extreme capital efficiency

<b>Founded</b> <b>2015</b>	<b>Total VC Investment<sup>1</sup></b> <b>\$84M</b>	<b>Patents &amp; Applications<sup>1</sup></b> <b>61</b>	<b>2019</b> IonQ raises ~\$62M in Series B  IonQ announces partnership with Amazon and Microsoft to bring hardware to their cloud services 
<b>Employees<sup>1</sup></b> <b>63</b>	<b>Spent To Date<sup>1</sup></b> <b>\$49M</b>	<b>Hardware Generations<sup>1,2</sup></b> <b>6</b>	<b>2017</b> IonQ raises \$20M in Series A

**Investors**

G/ amazon NEA SAMSUNG  
MUBADALA LOCKHEED MARTIN  
BOSCH Hewlett Packard Enterprise AIRBUS  
Cambium Capital ACME tao cup

**2015**  
Harry Weller (NEA) approaches Monroe & Kim; IonQ is born with \$2M seed

**2016**  
Monroe and Kim's labs at UMD and Duke surpass \$100M in combined total grants to date

**2018**  
IonQ Systems 1 and 2 execute first algorithms: BV-10 and H<sub>2</sub>O simulation

**2020**  
Monroe and team announce logical qubit with only 13 physical qubits (UMD)  
  
IonQ announces 32 qubit quantum computer with an expected quantum volume of 4,194,304, smashing record for most powerful quantum computer

1 As of 20 December 2020  
2 Five production generations and one in-development generation

12

163. Slide 21 of the Roadshow Presentation was titled, “IonQ Leads the Pack: Potential Quantum Volume by Vendor, Q2B December 2020.” The slide included a graphic showing that IonQ’s purported 32 qubit quantum computer had a quantum volume of “4,194,304,” which purportedly far exceeded any competitor’s quantum volume:



164. In describing this slide, Defendant Chapman told investors, “[s]lide 21 shows IonQ hardware stacked up against our competitors using quantum volume as a benchmark. As you can see, ***IonQ is easily winning.***”

165. The statements in paragraphs 160-64 above communicated to investors that IonQ’s 32 qubit computer existed, had an expected quantum volume of over 4 million and thus was 32,000 times more powerful than competing systems, and was the world’s “most powerful quantum computer.” These statements were false and misleading because IonQ did not have a 32 qubit computer, as explained above, *see* Substantive Allegations § C.i, and thus did not have a quantum computing system with an expected quantum volume of over 4 million that was 32,000 times stronger than any competing computer and/or the world’s most powerful quantum computer.

166. Slide 19 of the presentation was titled, “Focus on the Results, Not the Hype” and stated that IonQ’s quantum computer had the “***most usable qubits***” and the “***highest quantum volume by many orders of magnitude.***” When Defendant Chapman reached Slide 19 of the Roadshow Presentation, he told investors, “[o]n Slide 19, you can see that IonQ is leading in every important aspect of quantum computing, with ***the most usable qubits***, the building blocks for quantum computers.”





167. The statements in paragraph 166 above communicated to investors that IonQ’s 32 qubit computer had both more qubits, used more qubits in quantum calculations, and had greater quantum volume than any competing quantum computer. This statement was false and misleading because at the time the statement was made, IonQ did not have a 32 qubit computer, as explained above, *see* Substantive Allegations § C.i, and thus did not have a computer that contained more qubit and used more qubits in quantum calculations than any competitor. In addition, the statements in paragraph 166 above were particularly material to investors because Defendants characterized those statements as factual “results,” not “hype.”

168. Also on March 8, 2021, Defendants released a video introducing IonQ to investors, which was filed with the SEC that day as an exhibit to a current report on Form 8-K (the “Announcement Video”). In the video, the narrator intoned, “[i]n the five years since its founding, IonQ has remained at the forefront of this quest—the first simulation of water, the first trapped ion system on the cloud, and in October 2020, *the world’s most powerful quantum computer: a 32-qubit system that is a staggering 32,000 times more powerful than its closest competitors.*”

169. During the Bezinga interview on March 9, 2021, an interviewer noted that IonQ’s Roadshow Presentation claimed that the Company’s quantum computing system was “32,000x

more powerful than competitors with the quantum system,” and “[o]bviously, with your background, you know . . . *what some of those numbers mean.*” De Masi then assured investors that “*this is the 32 qubit system we’re looking at here.*”

170. The statements in paragraphs 168-69 above communicated to investors that IonQ’s 32 qubit computer existed, had an expected quantum volume of over 4 million and thus was 32,000 times more powerful than competing systems, and was the world’s “most powerful quantum computer.” These statements were false and misleading because IonQ did not have a 32 qubit computer, as explained above, *see* Substantive Allegations § C.i, and thus did not have a quantum computing system with an expected quantum volume of over 4 million that was 32,000 times stronger than any competing computer and/or the world’s most powerful quantum computer.

171. On April 13, 2021, Defendants held an “Analyst Day” during which Defendants presented a PowerPoint slide deck describing IonQ and the Business Combination to investment analysts (“Analyst Presentation”).

172. Slide 10 of the Analyst Presentation was titled “The Only Public Pure-Play Quantum Opportunity.” Immediately following the title, the slide stated unequivocally that IonQ had an “Unparalleled Technological Advantage” with quantum systems that were “*32,000x more powerful than competing quantum systems.*”

173. Slide 13 of the Analyst Presentation was titled, “IonQ: Leading the Quantum Computing Revolution” and stated that in 2020, IonQ announced a “*32 qubit quantum computer with an expected quantum volume of 4,194,304, smashing the record for most powerful quantum computer.*”

174. Slide 21 of the Analyst Presentation was titled, “IonQ Leads the Pack: Potential Quantum Volume by Vendor, Q2B December 2020.” The slide included a graphic showing that IonQ’s purported 32 qubit quantum computer had a quantum volume of “4,194,304.”

175. Defendants also filed with the SEC a transcript of a video shown to analysts at Analyst Day entitled, “Quantum Landscape” (“Quantum Landscape Transcript”). According to the transcript, the Quantum Landscape video touted to investors that, unlike IonQ’s direct competitor, Honeywell, “[t]o date IonQ, by comparison, has a ‘fully connected’ system, where it can create entanglement between any two ions in a chain of up to 32 qubits at any time, with no shuttling or swapping.”

176. The statements in paragraphs 168-75 above communicated to investors that IonQ’s 32 qubit computer existed, had an expected quantum volume of over 4 million and thus was 32,000 times more powerful than competing systems, and was the world’s “most powerful quantum computer.” These statements were false and misleading because IonQ did not have a 32 qubit computer, as explained above, *see* Substantive Allegations § C.i, and thus did not have a quantum computing system with an expected quantum volume of over 4 million that was 32,000 times stronger than any competing computer and/or the world’s most powerful quantum computer.

177. Slide 22 of the Analyst Presentation was titled, “Focus on the Results, Not the Hype” and stated that IonQ’s quantum computer had the “*most usable qubits*” and the “*highest quantum volume by many orders of magnitude*.”

178. The statements in paragraph 177 above communicated to investors that IonQ’s 32 qubit computer had both more qubits, used more qubits in quantum calculations, and had greater quantum volume than any competing quantum computer. This statement was false and misleading because at the time the statement was made, IonQ did not have a 32 qubit computer, as explained

above, *see* Substantive Allegations § C.i *supra*, and thus did not have a computer that contained more qubit and used more qubits in quantum calculations than any competitor. In addition, the statements in paragraph 177 above were particularly material to investors because Defendants characterized those statements as factual “results,” not “hype.”

179. On July 15, 2021, Defendants De Masi, Chapman, and Kramer participated in a discussion hosted by research analyst Ruben Roy of WestPark Capital and ICR, Inc., before an audience of investors (“ICR Discussion”). During the discussion, an attendee asked Defendants to distinguish IonQ’s quantum computing system from Honeywell’s quantum computing systems, given that both companies worked with “trapped ions.” Defendant Chapman responded by emphasizing IonQ’s purported 32 qubit computer, saying “you could kind of think of it as the Honeywell system is . . . maybe a good analogy would be *they have a two qubit bus and we have a 32 qubit bus.*”

180. Later in the ICR Discussion, one of the audience members noted that IonQ had been “advertising the 32 qubit quantum computers so far [in the ICR Discussion,] [b]ut it seems only the 11 qubit quantum computer is on the cloud for now. First of all, is that accurate?” Without hesitate, Defendant Chapman responded, “[t]hat is. *Both are true.*”

181. On September 14, 2021, Defendants Chapman, Kramer and De Masi participated in a virtual “fireside chat” for investors hosted by financial media outlet IPO Edge (“IPO Edge Chat”). The IPO Edge Chat began with a video promoting IonQ to attendees. Toward the end of the video, the narrator touted that IonQ was at the “forefront” of the quantum computing research and, “in October 2020, [created] *the world’s most powerful quantum computer, a 32 cubit system that is a staggering 32,000 times more powerful than its closest competitors.*”

182. The statements in paragraphs 179-81 above communicated to investors that IonQ had a 32 qubit quantum computer. This statement was false and misleading, however, because at the time the statement was made, IonQ did *not* have a 32 qubit computer, as explained above. *See* Substantive Allegations § C.i.

183. Defendants continued to mislead investors about the existence of a purported 32 qubit quantum computer after the Business Combination closed. On November 15, 2021, IonQ held its first quarterly earnings call with investors since becoming a public company (“Q3 2021 Call”). On that call, Defendant Chapman began by saying “Before I jump into the results and the events of the quarter, I wanted to give you some background for those who are new to the IonQ story,” and proclaimed that “***IonQ makes the world’s most powerful Quantum computers.***” Later, Defendant Chapman touted that IonQ had “two systems, which are servicing jobs out on the cloud for all three cloud partners and internal for our private cloud,” and “***an additional system*** which is [] what we call the 32 qubit systems, which right now is in private beta.”

184. The statements in paragraph 183 above communicated to investors that IonQ had a 32 qubit quantum computer. This statement was false and misleading, however, because at the time the statement was made, IonQ did *not* have a 32 qubit computer, as explained above. *See* Substantive Allegations § C.i.

**B. Misrepresentations Concerning the Miniaturization of IonQ’s Quantum Computing Systems**

185. During the Class Period, Defendants consistently touted to investors that one of the IonQ’s competitive advantages was its ability to reproduce and miniaturize its quantum computing systems. These statements were false and misleading, however, because Defendants knew, but never disclosed, that its quantum computer was a massive elephant-sized “primitive skunkworks” that was nowhere near ready to be miniaturized or reproduced.

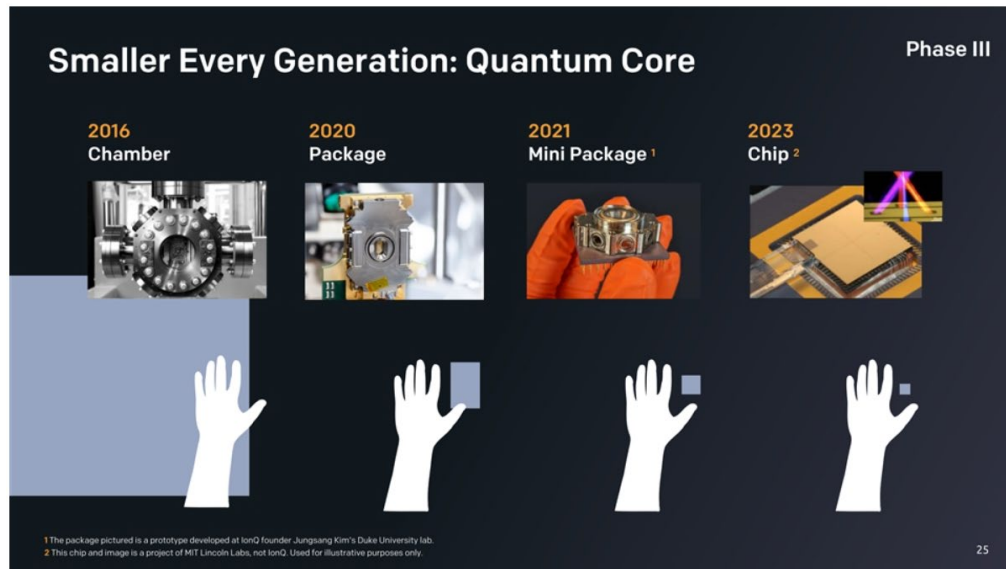
186. For example, Defendant De Masi began the Roadshow Presentation by touting that “IonQ’s technology is *uniquely easy to manufacture*. In addition to cloud revenue, *this manufacture ability of miniaturization advantages* mean that IonQ will have the option of selling complete systems to governments and other large counterparties.” “IonQ *has a tremendous lead over other quantum players*.”

187. Slide 24 of the Roadshow Presentation was titled, “IonQ’s Leading Modular Architecture: Each Generation of IonQ Hardware is Getting Smaller & Cheaper to Build.” The slide compared the size of IBM and Google’s quantum hardware, which appeared to be six feet and 20 feet wide, respectively, with an IonQ ion trap and vacuum chamber package that appeared to be only two inches wide. After showing this slide, Defendant Chapman told investors, “[f]or quantum to win, the systems need to shrink, and the cost per qubit must shrink as well, and IonQ is well-poised to win this phase too.”



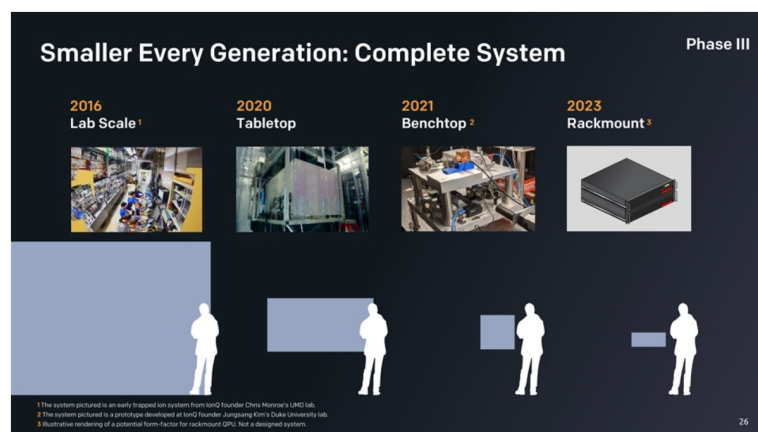
188. Chapman then touted to investors that IonQ had a competitive advantage in miniaturization because it had already developed or was about to release small quantum computing

devices. For example, Slide 25 of the presentation was titled “Smaller Every Generation: Quantum Core” and displayed pictures of what purported to be decreasing sizes of devices from 2016, to 2020, to 2021, to 2023 as compared to the size of a human hand.



189. In describing Slide 25, Defendant Chapman said, “[o]n Slide 25, you can see the evolution of our ion trap and the vacuum chamber . . . [t]he 2020 device is our new 32 qubit system, and about the size of a deck of cards.”

190. Slide 26 purported to compare sizes of entire generations of quantum computing systems, with IonQ’s prior-generation 11 qubit computer appearing larger than a person and its next-generation system being small enough to fit on a desk.



191. When Defendant Chapman voiced over Slide 26, he told investors, “[t]he 2020 systems are *the 11 qubit system found on Amazon and Microsoft*. The 2021 system is a prototype system at Jungsang’s lab at Duke, *now getting to less than a square foot*.”

192. Slides 36, 37, and 38 of the Analyst Presentation were identical to Slides 24, 25, and 26 of the Roadshow Presentation, and made the same visual representations of IonQ’s ability to miniaturize its quantum systems.

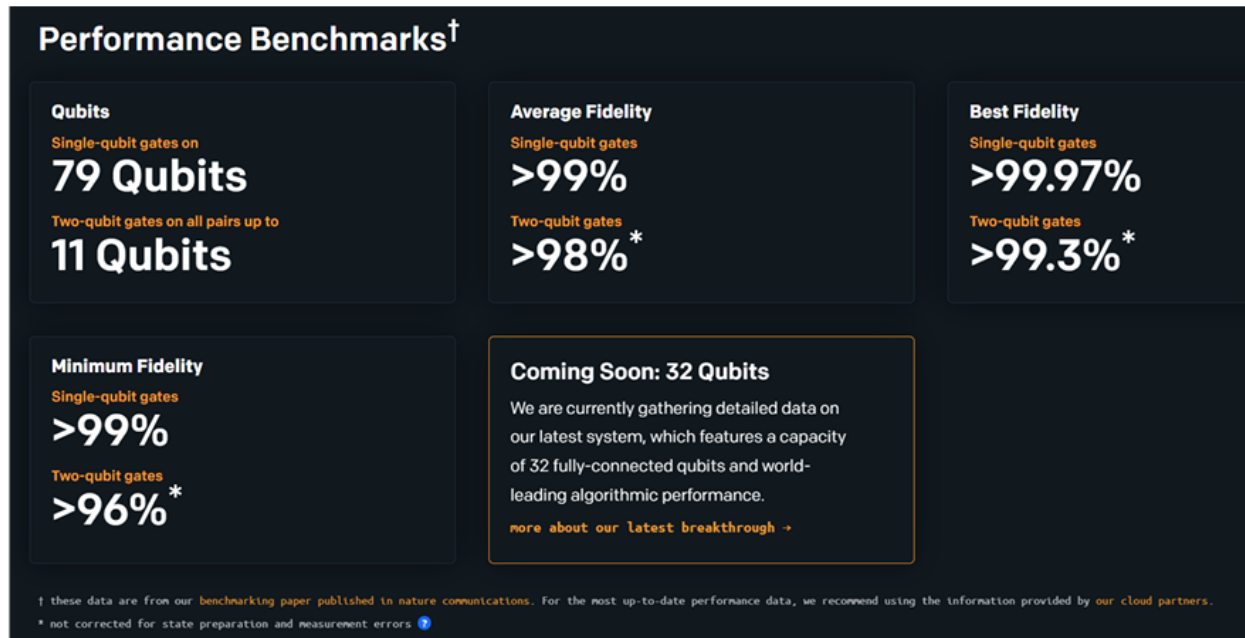
193. The statements in paragraphs 186-92 above communicated to investors that IonQ’s quantum computing systems had been and/or were read to be miniaturized. These statements were false and misleading, however, because Defendants knew, but did not disclose that IonQ’s quantum computing system was massive and could not be miniaturized. In addition, by affirmatively comparing IonQ’s quantum computing systems’ size to competitors’ quantum computing systems, Defendants had a duty to disclose all material facts about IonQ’s computing systems, including that the photos of those systems did not accurately reflect IonQ’s capacity to miniaturize its quantum computers.

### C. Misrepresentations Concerning the Error Rates of IonQ’s Quantum Computers

194. During the Class Period, Defendants repeatedly misrepresented IonQ’s error rates for its 11 qubit system as well as misled investors regarding the Company’s error correction capabilities when compared with competitors’ error correction capabilities.

195. During the Class Period, for example, IonQ’s website touted to investors that the Company’s *average fidelity* for its 11 qubit machine was >98% to >99%, depending on whether the system was using single or two-qubit gates, and that its *minimum fidelity* for the machine was greater than 99% for single-qubit gates and greater than 96% for two-qubit gates:





196. The statements in paragraph 195 above were materially false and misleading because Defendants knew, but did not disclose, that a quantum computing system with those fidelities had error rates that were so high that the system was not functional. By choosing to disclose those error rates, Defendants took on a duty to disclose all material facts necessary to make that disclosure not misleading, including that the rates were insufficient to support a quantum computing system. The statements in paragraph 195 above were also false and misleading because they materially overstated the fidelities of the Company's computing systems, which were approximately 70%.

197. Slide 23 featured a visual representation of the superiority of IonQ's approach to error correction.



198. When Defendant Chapman presented Slide 23 of the Roadshow Presentation, he told investors, “***IonQ competitors may need a thousand or even a million qubits to create a single error corrected qubit, but IonQ will only need 16.***”

199. Slide 34 of the Analyst Presentation contained the same image as Slide 23 of the Roadshow Presentation purporting to make a visual representation of the superiority of IonQ's approach to error correction.

200. The Registration Statement and Proxy represented to investors that “[f]or solid-state architectures, IonQ estimates that ***it may take at least 1,000 physical qubits to form a single error-corrected qubit, while for near-term applications with ion traps the ratio is closer to 16:1.***” In addition, the Registration Statement and Proxy further represented that (i) “Because the ion qubits feature very low idle and native error rates and are highly connected, ***IonQ expects the***

*error-correction overhead to be about 16:1 to achieve the first useful quantum applications. This contrasts with other approaches, for which IonQ estimates the overhead to be in the range of 1,000:1 to 100,000:1*"; and (ii) "Compared to the trapped ion approach, the qubits generated via superconducting suffer from short coherence times, high error rates, limited connectivity, *and higher estimated error-correction overhead (ranging from 1,000:1 to 100,000:1 to realize the error-corrected qubits from physical qubits).*"

201. These and other statements by Defendants about IonQ's error correction capabilities were misleading, however, because Defendants knew, but did not disclose, that while their estimate of 16 qubits to correct one error referred to IonQ's *current NISQ-A technology*, their estimate of 1,000 to 1 million qubits for their competitors to correct an error referred to qubits necessary to correct errors in their competitors' *earlier-phase, more rudimentary NISQ machine*. When Defendants affirmatively chose to compare the error correction capabilities of its technology with its competitors, it took on a duty to disclose all information necessary to make those comparisons not misleading, which Defendants violated by failing to disclose that their comparison were based on materially different eras of quantum computing and that as both IonQ and its competitors developed useful FTQC machines the difference in error correction would be substantially narrower.

**D. False and Misleading Statements Concerning IonQ's Purported "Tripling" of "Contract Bookings"**

202. Early in the morning of September 9, 2021, only three weeks before the Business Combination was scheduled to close, Defendants issued a press release entitled, "IonQ Triples Expectation for 2021 Contract Bookings" ("Bookings Release"). The release stated:

IonQ, the leader in quantum computing, today announced that it is tripling its expectation for 2021 total contract bookings from its previously announced target of \$5 million to \$15 million. For IonQ, *this commercial success demonstrates the real and rapidly*

*accelerating need for quantum computing among enterprise customers* and cements its leadership position in quantum computing. IonQ anticipates these bookings to generate recognized revenue over the next 36 months.

203. The Bookings Release went on to quote Defendant Chapman, who said:

We could not be more thrilled with the progress we are seeing in IonQ’s commercial efforts as *a growing number of customers are adopting quantum computing*. Quantum computing has arrived and is solving real-world problems in 2021. *We fully expect to see more marquee wins as our industry-leading technology* continues to advance . . . . Tripling our expectation for bookings *validates that the market for quantum computing is here now. We are bringing quantum computing to the Fortune 500*, along with leading governmental and academic institutions. The future looks bright for IonQ, and we are just getting started.

204. The Bookings Release also quoted Defendant De Masi as saying, “[t]he demand for IonQ’s quantum computers has never been clearer.”

205. On September 9, 2021, IonQ even posted the Bookings Release on Twitter, tweeting “*We’ve tripled our expectation for 2021 contract bookings! The market for quantum computing is growing at a rapid pace, and IonQ is both driving and capturing that increased demand.*”

206. The statements in paragraphs 202-05 above communicated to or gave investors the impression that IonQ’s “tripling” of contract bookings was from multiple customers, including “enterprise customers” and “Fortune 500” companies. The statements were materially false and misleading when made, however, because they failed to disclose that the increase contract bookings was solely from an agreement with the University of Maryland, which had a pre-existing relationship with IonQ’s Founders, who worked for the university. In other words, the bookings were the result of a pre-existing relationship, not a “real and rapidly accelerating need for quantum computing among enterprise customers,” “a growing number of customers are adopting quantum computing,” or IonQ “bringing quantum computing to the Fortune 500.”

207. On September 13, 2021, Defendants filed a revised investor presentation with the SEC entitled “Investor Updates: September 2021” (“September Presentation”). Slides 4 and 17 of the presentation touted that IonQ was projecting “3x Increase in 2021 Contract Bookings.” Although the slide noted that “[s]ales channels are still being defined; exact nature and accounting recognition of IonQ revenue to be determined. Bookings may include prepayments, cloud-based revenue, and signed contracts for future performance,” it did not disclose the source of the increase in bookings.

208. Slide 17 of the September Presentation, entitled, “IonQ Projects 3x Increase in 2021 Contract Bookings,” was devoted to the purported tripling of IonQ’s contract bookings. The slide stated, among other things, that “IonQ believes this anticipated commercial success *demonstrates the real and rapidly accelerating need for quantum computing and cements IonQ’s leadership position in quantum computing.*”

209. Read in the context of the September Presentation, the statements in paragraphs 207-08 attributed the increase in IonQ’s contract bookings to a “real and rapidly accelerating need for quantum computing,” *i.e.*, a need from enterprise customers and Fortune 500 companies. By specifically attributing the increase to an increase in demand, Defendants had a duty to disclose all material facts necessary to make the statements not misleading, including that the increase contract bookings was solely from an agreement with UMD, which had a pre-existing relationship with IonQ’s Founders. In other words, the bookings were the result of a pre-existing relationship, not any market need for quantum computing.

210. On September 14, 2021, during the IPO Edge Chat, Defendant De Masi touted that “[t]he quantum era has clearly arrived. How do I know this? *Well, last week IonQ tripled bookings guidance for 2021.*” Defendant De Masi continued, “I really can’t emphasize enough what an

outstanding achievement this is not only technologically, but also for Peter and Thomas as the CEO and CFO. *I don't know a lot of IPO's or companies in general that have literally increased in the middle of the year*, the revenue, effectively monetization proxy by 200%, and it's still only September . . . . If that doesn't prove the quantum era is here, I'm not sure what does." DeMasi continued, "We're striking partnerships with *customers* who care about solving problems today, and we're just getting started."

211. On September 20, 2021, the Company held a conference call with investors to discuss IonQ's purported results and achievements since the first quarter of 2021 ("September Investor Update Call"). During that call, Defendant Kramer boasted to investors that:

Earlier this month, we announced that *we were on track to significantly exceed our previously announced 2021 bookings target of \$5 million, and instead expect to end up at \$15 million for the full year*. This is a powerful demonstration of the results of our commercialization efforts, and that *real quantum cases are here*, right now. While we are still in early days, *there is already tangible demand for quantum computing power*, and we believe this is just the beginning of our monetization story.

212. The statements in paragraphs 207-11 above communicated to or gave investors the impression that IonQ's tripling of its "bookings target" was the result of "real quantum cases" and "tangible demand for quantum computing power." The statements were materially false and misleading when made, however, because they failed to disclose that the increased contract bookings were solely from an agreement with the University of Maryland, which had a pre-existing relationship with IonQ's Founders. In other words, the bookings were the result of a pre-existing relationship, not any "real quantum cases" or "tangible demand." In addition, by specifically attributing the increase to an increase in demand, Defendants had a duty to disclose all material facts necessary to make the statements not misleading, including disclosing that the increased contract bookings were solely from an agreement with UMD.



213. On November 15, 2021, Defendants issued a press release announcing the Company's financial performance for the third quarter of 2021 ("Q3 2021"). The release highlighted that bookings had reached over \$15 million (*i.e.*, tripled), and attributed the increase to cloud-based access to the Company's computers, telling investors that "IonQ's bookings results *demonstrate the Company's leadership and growing demand for IonQ's industry-leading trapped-ion hardware*. IonQ is the only maker of quantum hardware that is available through every major cloud provider in the United States, which includes Amazon Web Services, Microsoft Azure, and Google Cloud. *This gives public and private sectors unprecedented access to the Company's technology.*"

214. During the Q3 2021 Call, Defendant Chapman touted, "[w]e are proud to announce that we've tripled our bookings expectations for fiscal year 2021. This past quarter, we announced partnerships and collaborations with world class companies, including Goldman Sachs, Fidelity Center for Applied Technology, Accenture and GE Research, as well as with educational institute [sic] like the University of Maryland." Moments later, Defendant Kramer reiterated that "I am happy to announce that as of the end of Q3, our total bookings for the year have already exceeded our increased expectations for the full year ending up at \$15.1 million." Defendant Kramer attributed the increase in bookings (from \$5 million to \$15.1 million) to "the promise our customers see in our platform, and resulted from customers buying more and also earlier than we had expected."

215. During the call, Analyst Katy Huberty with Morgan Stanley pointedly asked, "about the bookings and mix of bookings year-to-date, what can you tell us about *the number of customers or deals* within that [15] million of bookings, and about *the mix of customers and use cases* that you've seen this year?" Defendant Chapman refused to answer the question directly,

telling Huberty, “What we have seen to date is that *we’ve seen thousands of customers running projects on our machines*,” “[w]e continue to see a mix of customers coming in through our public cloud where we actually don’t know who all the customers are,” “and we have customers on a private cloud as well.” Defendant Chapman concluded by emphatically refusing to identify customers behind the bookings, stating “[w]e are to date not going to break out the individual customer names because many of these actually covered by confidentiality process.”

216. Also during the call, Craig-Hallum analyst Richard Shannon asked, “I think you had a small number of contracts that provided most of the upside to your, your 2021 number here. Can you give us a sense of what you’re looking at in terms of the bookings pipeline today?” Rather than take the opportunity to disclose that the bookings were almost entirely from a single agreement, Defendant Kramer emphasized that they came from multiple customers. Defendant Kramer said, “So we have been busily talking to potential customers and partners for probably two years now. And it’s only been recently that we’ve been able to come to the market with an actual product that we can sell. And what we have seen is that *the reception in the market was larger and faster than we had anticipated*.”

217. Read together and in context, the statements in paragraph 213-16 above communicated to or gave investors the impression that IonQ’s tripling of its “bookings” was the result of thousands of customers paying to use IonQ’s platform based on “the promise our *customers* see in our platform” and the fact that those “*customers* [were] buying more and also earlier than we had expected.” The statements were materially false and misleading when made, however, because they failed to disclose that the increase contract bookings was virtually entirely attributable to the partnership with the University of Maryland to create a research laboratory. In addition, by specifically attributing the increase to “thousands of customers” and “the reception in



the market was larger and faster than we had anticipated,” Defendants had a duty to disclose all material facts necessary to make the statements not misleading, including disclosing that the increase contract bookings was almost entirely attributed to the partnership with UMD.

**E. False and Misleading Statements in the Certifications Attached to IonQ’s Quarterly and Annual Reports During the Class Period**

218. Appended as exhibits to the Company’s 2021 10-K were certifications signed by Defendants Chapman and Kramer pursuant to the Section 302 of the Sarbanes-Oxley Act of 2002, in which Defendants Chapman and Kramer certified that they had “reviewed the annual report on Form 10-K of the IonQ, Inc. [and] . . . [b]ased on my knowledge [the] report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report” and that the 2021 10-K “fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act” and “fairly presents, in all material respects, the financial condition and results of operations” of IonQ.

219. Each of the above statements excerpted from the exhibits to the IonQ’s 2021 10-K was materially false and misleading because the 2021 10-K “omitted to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading” and did not “fully comply with the requirements of Section 13(a) or 15(d) of the Exchange Act” because the 2021 10-K failed to disclose that: (i) IonQ did not have a 32 qubit quantum computer, and (ii) IonQ’s statements regarding error correction compared the error correction capabilities of an NISQ era quantum system with hypothetical error correction of a fully developed and functional FTQC quantum system, and (iii) consequently, IonQ’s public statements were materially false and misleading and/or lacked a reasonable basis at all relevant times.

220. Appended as exhibits to the Company's Q3 2021 10-Q were certifications signed by Defendants Chapman and Kramer pursuant to the Section 302 of the Sarbanes-Oxley Act of 2002, in which Defendants Chapman and Kramer certified that "[t]he [Q3 2021 10-Q] fully complies with the requirements of Section 13(a) or 15(d) of the [Exchange Act] (15 U.S.C. 78m)" and "fairly present[], in all material respects, the financial condition and results of operations" of IonQ. These statements were materially false and misleading because the Q3 2021 10-Q failed to disclose that: (i) IonQ did not have a 32 qubit quantum computer, and (ii) IonQ's statements regarding error correction compared the error correction capabilities of an NISQ era quantum system with hypothetical error correction of a fully developed and functional FTQC quantum system, and (iii) consequently, IonQ's public statements were materially false and misleading and/or lacked a reasonable basis at all relevant times.

### **THE TRUTH EMERGES**

221. IonQ's share price closed at \$7.86 on May 2, 2022. Scorpion published the Scorpion Report the following morning, May 3, 2022, which disclosed that the Company did not have a 32 qubit computer, that its existing systems were nowhere near miniaturization, that the Company had misled investors about its system's error rates and error correction, and that the Company had misrepresented the source of its purported contract bookings increase, as alleged in Substantive Allegations sections A–D, *supra*. The Scorpion Report was also a materialization of the risk that the Company's share price would plummet because the Company had been misrepresenting Company's technology—*e.g.*, 32 qubit quantum computing system, miniaturization, error rate and error correction—and contract bookings. On this news and the materialization of these undisclosed risks, the Company's share price fell \$0.71, or 9.03%, to close at \$7.15 per share on nearly triple its usual trading volume.

222. The following day, on May 4, 2022, the stock price rallied back to \$7.50, but after the market closed, Defendants issued an anodyne press release that did not dispute—or even address—any of the claims in the Scorpion Report, nor did the report include a statement from Defendant Chapman, who had been accused repeatedly of lying (the “May 4 Response”). Instead, the May 4 Response merely quoted IonQ’s chairman of the board as stating that, “I have the utmost confidence in the IonQ team and their integrity, commitment to ongoing research and patented inventions, and accomplishments that benefit IonQ’s customers and partners.”

223. Recognizing that the Company had not disputed any of the report’s core contentions, IonQ’s share price collapsed, falling to \$6.23 (down 16.9%) on May 5, and then continuing to fall all the way to \$4.34 on May 11, 2022, down a total of \$3.52 (or 44.8%).

224. On May 12, desperate to stop the stock’s collapse, IonQ’s Founders issued another press release calling the Scorpion Report “riddled with disinformation, demonstrating a breathtaking ignorance of the quantum computing industry in general and IonQ technology in particular” (“May 12 Response”). Once again, however, the May 12 Response did not address, let alone try to refute, *any* of the Scorpion Report’s claims. Incredibly, the May 12 Response did not even aver that the Company *had a 32 qubit quantum computer*. Instead, the May 12 Response characterized the Scorpion Report as “poorly researched” and “riddled with disinformation.” Instead of addressing the report’s claims, IonQ’s Founders repeated marking pabulum, telling investors that “We have built several generations of quantum computers with increasing levels of performance,” “some of our early systems can be accessed via commercial cloud servers, where enormous numbers of quantum circuits have been run over the last few years,” and “[w]e believe IonQ has a well-defined path to scale its hardware and tackle problems of commercial value, which it expects will happen in a few years, not in a decade or two.”

### **ADDITIONAL SCIENTER ALLEGATIONS**

225. As set forth above, Defendants each had scienter as to the false and misleading nature of their statements because they each knew or, at a minimum, recklessly disregarded the facts described in Substantive Allegations sections A–D and Defendants’ Materially False and Misleading Statements sections A–E *supra*, for the following reasons.

- a. Defendant De Masi had a master’s degree in physics from the University of Cambridge and held himself out as understanding IonQ’s technology and the claims the Company was making about its technology. In addition, De Masi assured investors that he had relied on his physics background to select IonQ for the Business Combination.
- b. Defendants De Masi and You had motive and opportunity to commit fraud because the “sponsor,” which Defendant You managed and which Defendant De Masi was a member, paid an aggregate of approximately \$8.0 million for its 4,000,000 warrants to purchase shares of IonQ’s Class A Stock. The warrants would expire and be worthless if the business combination is not consummated by November 17, 2022.
- c. CW1, who reported directly to Defendant Chapman, confirmed that no 32 qubit quantum computing system existed and IonQ had no means of miniaturizing their quantum computers. CW1 stated that he learned from IonQ’s scientists that the system did not exist, and knew that Defendant Chapman had no roadmap to miniaturize the quantum computers.
- d. dMY’s Board of Directors of which Defendants De Masi, You, Anderson, Luthi, and Wert were members, emphasized to investors the extent and nature of their due diligence on IonQ and its business.
- e. dMY’s Board of Directors of which Defendants De Masi, You, Anderson, Luthi, and Wert were members, signed or directed Defendant You to sign the Proxy, which contained material misstatements.
- f. As described in the Scorpion Report, Defendant Chapman was confronted directly by an IonQ employee upset by the Company’s false assertions about its non-existent 32 qubit quantum computing system.
- g. Defendants Chapman and Kramer repeatedly responded evasively to questions about IonQ’s customers and bookings from analysts.
- h. Defendants Chapman and Kramer signed certifications attached to SEC filings which they knew contained material misstatements.

226. In addition to the above allegations, which on their own create a strong inference of scienter, additional factors support a strong inference of the Individual Defendants' scienter, including: (i) the outsized profits each Individual Defendant stood to reap from the Business Combination, (ii) Defendants De Masi, You, Chapman, and Kramer's high-level positions within IonQ, (iii) that the misstatements and omissions of material facts concern the Company's core operations, about which the Individual Defendants were repeatedly questioned and spoke; and (iii) corporate scienter.

227. As a quantum computing development company, IonQ's purported 32 qubit system, miniaturization ability, fidelity and error correction were all core elements of its business. IonQ's very existence depended on its ability to commercialize a quantum computing system that could be miniaturized and had 99.99% fidelity and efficient error correction.

228. Defendants De Masi and You's respective scienter is also evident from the shockingly large profits they stood to make after the Business Combination. For example, in advance of the business combination, the sponsor, *i.e.*, an LLC that You managed and of which De Masi was a member, purchased 7,500,000 dMY shares for an aggregate purchase price of only *twenty-five thousand dollars* (\$25,000) (the "founder shares"). The founder shares were automatically converted to Class A common stock of IonQ in connection with the Business Combination. Within a month after the Business Combination closed on September 30, 2021, the founder shares were worth over **\$117 million**. In other words, in exchange for a \$25,000 investment, Defendant Palihapitiya stood to receive an astonishing return of **469,700%**.

229. Similarly, Defendants Chapman and Kramer had powerful motives to inflate the Company's share price because they had massive amounts of IonQ stock. Defendant Chapman had at least 3,913,501 shares of IonQ common stock, which were worth **\$61,285,425** within a

month after the Business Combination. Defendant Kramer had 675,464 shares of IonQ common stock worth ***\$10,577,766***.

**A. Individual Defendants' High-Level Positions Within dMY and IonQ**

230. Defendants Chapman and Kramer each knew of the false and misleading nature of the statements discussed above, or at a minimum was reckless for not knowing these matters.

231. Defendant De Masi served as dMY's CEO and Chairman at all relevant times prior to the Business Combination, and owned and/or operated dMY prior to the Business Combination, and served as a director of IonQ after the Business Combination.

232. Defendant You was the Chief Financial Officer and a Director of dMY prior to the Business Combination, and a director of IonQ after the Business Combination.

233. Defendant Chapman was president and CEO of IonQ at all relevant times. IonQ identified Chapman as an "Executive Officer" of the Company during the Class Period.

234. Defendant Kramer was CFO of IonQ at all relevant times. IonQ identified Kramer as an "Executive Officer" of the Company during the Class Period.

235. As dMY's CEO and Chairman, Defendant De Masi, as a result of the extensive diligence he and dMY conducted into IonQ, was privy to all material information concerning IonQ's purported 32 qubit quantum computing system, miniaturization, fidelity, and error correction, and contract bookings.

236. As dMY's CFO, Defendant You, as a result of the extensive diligence he and dMY conducted into IonQ, was privy to all material information concerning IonQ's purported 32 qubit quantum computing system, miniaturization, fidelity, and error correction, and contract bookings.

237. As IonQ's CEO, Defendant Chapman was the head of IonQ's management and operations teams. Chapman, by virtue of his responsibilities and activities as CEO, was privy to

all material information concerning IonQ's purported 32 qubit quantum computing system, miniaturization, fidelity, and error correction, and contract bookings.

238. Defendant Kramer, as CFO of IonQ, was privy to all material information concerning IonQ's purported 32 qubit quantum computing system, miniaturization, fidelity, and error correction, and contract bookings.

239. Defendants Anderson, Luthi, and Wert, as Directors of dMY, and as a result of the extensive diligence they and dMY conducted into IonQ, was each privy to all material information concerning IonQ's purported 32 qubit quantum computing system, miniaturization, fidelity, and error correction, and contract bookings.

240. The Scorpion Report likewise makes clear that Defendants Chapman and Kramer knew that IonQ did not have a 32 qubit quantum computing system, could not miniaturize the Company's existing computing systems, had exaggerated its fidelity and made misleading statements regarding error correction, and had misled investors regarding contract bookings.

**B. Importance of 32 Qubit Computer to IonQ**

241. The fraud alleged herein relates to the core business and operations of IonQ so knowledge of the fraud may be imputed to Defendants. IonQ's sole business was developing quantum computing systems. Expanding the numbers of qubits available in those systems, miniaturizing the systems, and maximizing the accuracy and efficiency of fidelity and error correction were essential to the systems. In addition, as a start-up company, recruiting customers was essential to the Company's survival. Accordingly, it is appropriate to presume that Defendants were apprised of, had access to, or had actual knowledge of all material information related to IonQ during the Class Period, including the material information that was improperly withheld and/or misrepresented to investors.

242. Further, by virtue of their receipt of information reflecting the true facts regarding IonQ's operations and its marketplace, as well as their control over and/or receipt of the Company's materially misleading misstatements and/or their associations with the Company that made them privy to confidential proprietary information concerning IonQ, the Individual Defendants were active and culpable participants in the fraudulent scheme alleged herein. The Individual Defendants knew of and/or recklessly disregarded the falsity and misleading nature of the information, which they caused to be disseminated to the investing public. The fraud as described herein could not have been perpetrated without the knowledge and/or recklessness and complicity of personnel at the highest level of the Company, including the Individual Defendants.

**C. Corporate Scienter**

243. The allegations above also establish a strong inference that IonQ as an entity acted with corporate scienter throughout the Class Period, as its officers, management, and agents, including, but not limited to, the Individual Defendants, had actual knowledge of the misrepresentations and omissions of material facts set forth herein (for which they had a duty to disclose), or acted with reckless disregard for the truth because they failed to ascertain and to disclose such facts, even though such facts were available to them. Such material misrepresentations and/or omissions were done knowingly or with recklessness, and without a reasonable basis, for the purpose and effect of concealing IonQ's true operating condition and present and expected financial performance from the investing public. By concealing these material facts from investors, IonQ maintained and/or increased its artificially inflated common stock prices throughout the Class Period.

**PLAINTIFF'S CLASS ACTION ALLEGATIONS**

244. Plaintiffs bring this action as a class action pursuant to Federal Rule of Civil Procedure 23(a) and (b)(3) on behalf of a class consisting of all persons or entities who purchased



or otherwise acquired IonQ securities during the Class Period and who were damaged thereby (the “Exchange Act Class”); and a class consisting of all persons or entities that purchased IonQ securities pursuant and/or traceable to the Registration Statement, Prospectus Supplements, and/or the Offering Documents (the “Securities Act Class”). Excluded from the Securities Act Class and Exchange Act Class are Defendants, the officers and directors of the Company at all relevant times, members of their immediate families, legal representatives, heirs, successors or assigns and any entity in which Defendants and/or the officers and directors of the Company have or had a controlling interest.

245. The members of the Exchange Act Class and/or Securities Act Class are so numerous that joinder of all members is impracticable. Prior to the Business Combination, dMY’s securities traded on the NYSE under the ticker symbols DMYI.U (units, each consisting of one share of Class A common stock and one-fourth of one redeemable warrant), DMYI (Class A common stock, par value \$0.0001 per share), and DMYI WS (warrants, each whole warrant exercisable for one share of Class A common stock, each at an exercise price of \$11.50 per share). As of August 16, 2021, the date of the filing of dMY’s Q2 2021 10Q, there were 30,000,000 shares of dMY’s Class A common stock and 7,500,000 shares of dMY’s Class B common stock issued and outstanding, respectively. dMY’s Q2 2021 10Q further reported that, as of June 30, 2021 and December 31, 2020, the Company had 7,500,000 “Public Warrants” and 4,000,000 “Private Placement Warrants” outstanding, respectively. When the Business Combination closed on September 30, 2021, dMY’s common stock and warrants were converted into Class A common stock and warrants of IonQ. The following day, on October 1, 2021, IonQ’s securities began trading on the NYSE under the ticker symbols IONQ for Class A common stock and IONQ.WS for warrants. In a current report on Form 8-K filed with the SEC on September 30, 2021, IonQ

reported that, as of the closing of the business combination, it had outstanding 192,485,413 shares of Class A common stock; 8,301,202 warrants, each exercisable for one share of Class A common stock at a price of \$1.38 per share; and 11,500,000 warrants, each exercisable for one share of Common Stock at a price of \$11.50 per share. Since the closing of the Business Combination, IonQ's securities have actively traded on the NYSE.

246. While the exact number of the Exchange Act Class members and/or Securities Act Class members is unknown to Plaintiffs at this time, and can be ascertained only through appropriate discovery, Plaintiffs believe that there are hundreds, if not thousands of members in each of the proposed Exchange Act Class and/or Securities Act Class. Record owners and other members of the Exchange Act Class and/or Securities Act Class may be identified from records maintained by IonQ or its transfer agent and may be notified of the pendency of this action by mail, using the form of notice similar to that customarily used in securities class actions.

247. Plaintiffs' claims are typical of the claims of the members of the Class as all members of the Class are similarly affected by Defendants' wrongful conduct in violation of federal law that is complained of herein.

248. Plaintiffs will fairly and adequately protect the interests of the members of the Class and has retained counsel competent and experienced in class and securities litigation. Plaintiffs have no interests antagonistic to or in conflict with those of the Class.

249. Common questions of law and fact exist as to all members of the Class and predominate over any questions solely affecting individual members of the Class. Among the questions of law and fact common to the Class are:

- whether the federal securities laws were violated by Defendants' acts as alleged herein;

- whether statements made by Defendants to the investing public during the Class Period misrepresented material facts about the business, operations and management of IonQ;
- whether the Individual Defendants caused IonQ to issue false and misleading financial statements during the Class Period;
- whether Defendants acted knowingly or recklessly in issuing false and misleading financial statements;
- whether the prices of IonQ Securities during the Class Period were artificially inflated because of the Defendants' conduct complained of herein; and
- whether the members of the Class have sustained damages and, if so, what is the proper measure of damages.

250. A class action is superior to all other available methods for the fair and efficient adjudication of this controversy since joinder of all members is impracticable. Furthermore, as the damages suffered by individual Class members may be relatively small, the expense and burden of individual litigation make it impossible for members of the Class to individually redress the wrongs done to them. There will be no difficulty in the management of this action as a class action.

251. Plaintiffs will rely, in part, upon the presumption of reliance established by the fraud-on-the-market doctrine in that:

- Defendants made public misrepresentations or failed to disclose material facts during the Class Period;
- the omissions and misrepresentations were material;
- IonQ securities are traded in an efficient market;
- IonQ's shares were liquid and traded with moderate to heavy volume during the Class Period;
- IonQ traded on the NYSE and was covered by multiple analysts;
- the misrepresentations and omissions alleged would tend to induce a reasonable investor to misjudge the value of IonQ's securities; and

- Plaintiffs and members of the Class purchased, acquired and/or sold IonQ securities between the time the Defendants failed to disclose or misrepresented material facts and the time the true facts were disclosed, without knowledge of the omitted or misrepresented facts.

252. Based upon the foregoing, Plaintiffs and the members of the Class are entitled to a presumption of reliance upon the integrity of the market.

253. Alternatively, Plaintiffs and the members of the Class are entitled to the presumption of reliance established by the Supreme Court in *Affiliated Ute Citizens of the State of Utah v. United States*, 406 U.S. 128, 92 S. Ct. 2430 (1972), as Defendants omitted material information in their Class Period statements in violation of a duty to disclose such information, as detailed above.

### **COUNT I**

#### **(VIOLATIONS OF SECTION 10(B) OF THE EXCHANGE ACT AND RULE 10B-5 PROMULGATED THEREUNDER AGAINST THE EXCHANGE ACT DEFENDANTS)**

254. Plaintiffs repeat and re-allege each and every allegation contained above as if fully set forth herein.

255. This Count is asserted against Defendants and is based upon Section 10(b) of the Exchange Act, 15 U.S.C. § 78j(b), and Rule 10b-5 promulgated thereunder by the SEC.

256. During the Class Period, Defendants engaged in a plan, scheme, conspiracy and course of conduct, pursuant to which they knowingly or recklessly engaged in acts, transactions, practices and courses of business which operated as a fraud and deceit upon Plaintiffs and the other members of the Class; made various untrue statements of material facts and omitted to state material facts necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading; and employed devices, schemes and artifices to defraud in connection with the purchase and sale of securities. Such scheme was intended to, and, throughout the Class Period, did: (i) deceive the investing public, including Plaintiffs and other Class

members, as alleged herein; (ii) artificially inflate and maintain the market price of IonQ securities; and (iii) cause Plaintiffs and other members of the Class to purchase or otherwise acquire IonQ securities and options at artificially inflated prices. In furtherance of this unlawful scheme, plan and course of conduct, Defendants, and each of them, took the actions set forth herein.

257. Pursuant to the above plan, scheme, conspiracy, and course of conduct, each of the Defendants participated directly or indirectly in the preparation and/or issuance of the quarterly and annual reports, SEC filings, press releases and other statements and documents described above, including statements made to securities analysts and the media that were designed to influence the market for IonQ securities. Such reports, filings, releases and statements were materially false and misleading in that they failed to disclose material adverse information and misrepresented the truth about IonQ's finances and business prospects.

258. By virtue of their positions at IonQ, Defendants had actual knowledge of the materially false and misleading statements and material omissions alleged herein and intended thereby to deceive Plaintiffs and the other members of the Class, or, in the alternative, Defendants acted with reckless disregard for the truth in that they failed or refused to ascertain and disclose such facts as would reveal the materially false and misleading nature of the statements made, although such facts were readily available to Defendants. Said acts and omissions of Defendants were committed willfully or with reckless disregard for the truth. In addition, each Defendant knew or recklessly disregarded that material facts were being misrepresented or omitted as described above.

259. Information showing that Defendants acted knowingly or with reckless disregard for the truth is peculiarly within Defendants' knowledge and control. As the senior managers

and/or directors of IonQ, the Individual Defendants had knowledge of the details of IonQ's internal affairs.

260. The Individual Defendants are liable both directly and indirectly for the wrongs complained of herein. Because of their positions of control and authority, the Individual Defendants were able to and did, directly or indirectly, control the content of the statements of IonQ. As officers and/or directors of a publicly-held company, the Individual Defendants had a duty to disseminate timely, accurate, and truthful information with respect to IonQ's businesses, operations, future financial condition and future prospects. As a result of the dissemination of the aforementioned false and misleading reports, releases and public statements, the market price of IonQ securities was artificially inflated throughout the Class Period. In ignorance of the adverse facts concerning IonQ's business and financial condition which were concealed by Defendants, Plaintiffs and the other members of the Class purchased or otherwise acquired IonQ securities at artificially inflated prices and relied upon the price of the securities, the integrity of the market for the securities and/or upon statements disseminated by Defendants, and were damaged thereby.

261. During the Class Period, IonQ securities were traded on an active and efficient market. Plaintiffs and the other members of the Class, relying on the materially false and misleading statements described herein, which the Defendants made, issued or caused to be disseminated, or relying upon the integrity of the market, purchased or otherwise acquired shares of IonQ securities at prices artificially inflated by Defendants' wrongful conduct. Had Plaintiffs and the other members of the Class known the truth, they would not have purchased or otherwise acquired said securities, or would not have purchased or otherwise acquired them at the inflated prices that were paid. At the time of the purchases and/or acquisitions by Plaintiffs and the Class, the true value of IonQ securities was substantially lower than the prices paid by Plaintiffs and the

other members of the Class. The market price of IonQ securities declined sharply upon public disclosure of the facts alleged herein to the injury of Plaintiffs and Class members.

262. By reason of the conduct alleged herein, Defendants knowingly or recklessly, directly or indirectly, have violated Section 10(b) of the Exchange Act and Rule 10b-5 promulgated thereunder.

263. As a direct and proximate result of Defendants' wrongful conduct, Plaintiffs and the other members of the Class suffered damages in connection with their respective purchases, acquisitions and sales of the Company's securities during the Class Period, upon the disclosure that the Company had been disseminating misrepresented financial statements to the investing public.

## **COUNT II**

### **(FOR VIOLATIONS OF §14(A) OF THE EXCHANGE ACT AND RULE 14A-9 PROMULGATED THEREUNDER AGAINST ALL DEFENDANTS)**

264. Plaintiffs repeat and re-allege the allegation contained above in Paragraphs 16-154 as if fully set forth herein.

265. This Count does not sound in fraud. Plaintiffs do not allege that Defendants acted with scienter or fraudulent intent for the purposes of this Count as they are not elements of a §14(a) claim.

266. The Proxy for the Business Combination contained materially false and/or misleading statements, as well as failed to disclose material adverse facts about the IonQ's business, operations, and prospects. Specifically, Defendants failed to disclose to investors: that (1) IonQ did not have a 32-qubit quantum computing system and (2) was misrepresenting its systems' error correction capabilities.

267. The Proxy stated that “*IonQ’s 32-qubit system, which is an important milestone for IonQ’s technical roadmap and commercialization*, is not yet available *for customers* and may never be available.” These filings further advised that “*IonQ is developing its next-generation 32-qubit quantum computer system*, which has not yet been made available to customers.”

268. The statements in paragraph 267 above communicated to investors that IonQ had an existing 32 qubit quantum computing system. This statement was false and misleading, however, because at the time these statements were made, IonQ did **not** have a 32 qubit computer, as explained above. *See* Substantive Allegations § C.i.

269. The Proxy represented to investors that “For solid-state architectures, IonQ estimates that *it may take at least 1,000 physical qubits to form a single error-corrected qubit, while for near-term applications with ion traps the ratio is closer to 16:1.*” In addition, the Proxy further represented that (i) “Because the ion qubits feature very low idle and native error rates and are highly connected, *IonQ expects the error-correction overhead to be about 16:1 to achieve the first useful quantum applications. This contrasts with other approaches, for which IonQ estimates the overhead to be in the range of 1,000:1 to 100,000:1*”; and (ii) “Compared to the trapped ion approach, the qubits generated via superconducting suffer from short coherence times, high error rates, limited connectivity, *and higher estimated error-correction overhead (ranging from 1,000:1 to 100,000:1 to realize the error-corrected qubits from physical qubits).*”

270. The statements in paragraph 269 above about IonQ’s error correction capabilities were misleading, however, because while their estimate of 16 qubits to correct one error referred to IonQ’s *current NISQ-A technology*, their estimate of 1,000 to 1 million qubits for their competitors to correct an error referred to qubits necessary to correct errors in their competitors’ *earlier-phase, more rudimentary NISQ machine*. When Defendants affirmatively chose to



compare the error correction capabilities of its technology with its competitors, it took on a duty to disclose all information necessary to make those comparisons not misleading, which Defendants violated by failing to disclose that their comparison were based on materially different eras of quantum computing and that as both IonQ and its competitors developed useful FTQC machines the difference in error correction would be substantially narrower.

271. Plaintiffs and other shareholders relied on the above misrepresentations when deciding to invest in IonQ and/or approve the Merger, which proximately caused damages when the truth concerning these statements was revealed by the Scorpion Report on May 3, 2022. IonQ's share price closed at \$7.86 on May 2, 2022. Scorpion published the Scorpion Report the following morning, May 3, 2022, which disclosed *inter alia* that the Company did not have a 32 qubit computer and that the Company had misled investors about its system's error rates and error correction. The Company's share price fell \$0.71, or 9.03%, to close at \$7.15 per share on nearly triple its usual trading volume.

272. The following day, on May 4, 2022, the stock price rallied back to \$7.50, but after the market closed, Defendants issued the May 4 Response, an anodyne press release that did not dispute—or even address—any of the claims in the Scorpion Report, nor did the report include a statement from Defendant Chapman, who had been accused repeatedly of lying. Instead, the May 4 Response merely quoted IonQ's chairman of the board as stating that, “I have the utmost confidence in the IonQ team and their integrity, commitment to ongoing research and patented inventions, and accomplishments that benefit IonQ's customers and partners.”

273. Recognizing that the Company had not disputed any of the report's core contentions, IonQ's share price collapsed, falling to \$6.23 (down 16.9%) on May 5, and then continuing to fall all the way to \$4.34 on May 11, 2022, down a total of \$3.52 (or 44.8%).

274. On May 12, desperate to stop the stock's collapse, IonQ's Founders issued the May 12 Response calling the Scorpion Report "riddled with disinformation, demonstrating a breathtaking ignorance of the quantum computing industry in general and IonQ technology in particular." Once again, however, the May 12 Response did not address, let alone try to refute, *any* of the Scorpion Report's claims. Incredibly, the May 12 Response did not even aver that the Company *had a 32 qubit quantum computer*. Instead, the May 12 Response characterized the Scorpion Report as "poorly researched" and "riddled with disinformation." Instead of addressing the report's claims, IonQ's Founders repeated marking pabulum, telling investors that "We have built several generations of quantum computers with increasing levels of performance," "some of our early systems can be accessed via commercial cloud servers, where enormous numbers of quantum circuits have been run over the last few years," and "[w]e believe IonQ has a well-defined path to scale its hardware and tackle problems of commercial value, which it expects will happen in a few years, not in a decade or two."

275. Had the Proxy accurately and truthfully described IonQ's quantum computing capabilities, that information would have materially affected investors' decisions to vote for, against, or abstain from the Merger. Thus, the misrepresentations in the Proxy caused the damages to Plaintiffs and other investors described above.

276. SEC Rule 14a-9, 17 C.F.R. §240.14a-9, promulgated pursuant to §14(a) of the Exchange Act, provides:

No solicitation subject to this regulation shall be made by means of any proxy statement, form of proxy, notice of meeting or other communication, written or oral, containing any statement which, at the time and in the light of the circumstances under which it is made, is false or misleading with respect to any material fact, or which omits to state any material fact necessary in order to make the statements therein not false or misleading or necessary to correct any statement in any earlier communication with respect to the

solicitation of a proxy for the same meeting or subject matter which has become false or misleading.

277. Defendants prepared and disseminated the false and misleading Proxy specified above, which failed to disclose material facts necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading in violation of §14(a) of the Exchange Act and Rule 14a-9 promulgated thereunder.

278. By virtue of their positions within dMY and/or IonQ and their due diligence regarding the Business Combination, Defendants were aware of this information and of their duty to disclose this information in the Proxy. The Proxy was prepared, reviewed, and/or disseminated by Defendants. The Proxy misrepresented and/or omitted material facts, as detailed above. Defendants were at least negligent in filing the Proxy with these materially false and misleading statements.

279. As stated herein, the Proxy contained untrue statements of material fact and omitted to state material facts necessary to make the statements made not misleading in violation of §14(a) of the Exchange Act and SEC Rule 14a-9 promulgated thereunder. The Proxy was an essential link in the consummation of the Business Combination. Defendants also failed to correct the Proxy prior to the Business Combination and the failure to update and correct false statements is also a violation of §14(a) of the Exchange Act and SEC Rule 14a-9 promulgated thereunder.

280. As a direct result of Defendants' negligent preparation, review, and dissemination of the false and/or misleading Proxy, Plaintiffs and the Class were precluded from exercising their right to seek redemption of their dMY shares prior to the Merger on a fully informed basis and were induced to vote their shares and accept inadequate consideration in connection with the Business Combination. The false and misleading Proxy used to obtain shareholder approval of the Business Combination deprived Plaintiffs and the Class of their right to a fully informed

shareholder vote in connection therewith and the full and fair value for their dMY shares. At all times relevant to the dissemination of the materially false and/or misleading Proxy, Defendants were aware of and/or had access to the true facts concerning the true value of IonQ, which was far below the assets that shareholders received in the Business Combination. Thus, as a direct and proximate result of the dissemination of the false and misleading Proxy defendants used to obtain shareholder approval of and thereby consummate the Business Combination, Plaintiffs and the Class have suffered damage and actual economic losses in an amount to be determined at trial.

281. The omissions and false and misleading statements in the Proxy were material in that a reasonable stockholder would have considered them important in deciding how to vote on the Business Combination. In addition, a reasonable investor would view a full and accurate disclosure as significantly altering the “total mix” of information made available in the Proxy and in other information reasonably available to stockholders.

282. By reason of the foregoing, defendants have violated §14(a) of the Exchange Act and Rule 14a-9(a) promulgated thereunder.

### **COUNT III**

#### **(VIOLATIONS OF SECTION 20(A) OF THE EXCHANGE ACT AGAINST THE INDIVIDUAL DEFENDANTS)**

283. Plaintiffs repeat and re-allege each and every allegation contained in the foregoing paragraphs as if fully set forth herein.

284. During the Class Period, the Individual Defendants participated in the operation and management of IonQ, and conducted and participated, directly and indirectly, in the conduct of IonQ’s business affairs. Because of their senior positions, they knew the adverse non-public information about IonQ’s misstatement of income and expenses and false financial statements.

285. As officers and/or directors of a publicly owned company, the Individual Defendants had a duty to disseminate accurate and truthful information with respect to IonQ's financial condition and results of operations, and to correct promptly any public statements issued by IonQ which had become materially false or misleading.

286. Because of their positions of control and authority as senior officers, the Individual Defendants were able to, and did, control the contents of the various reports, press releases and public filings which IonQ disseminated in the marketplace during the Class Period concerning IonQ's results of operations. Throughout the Class Period, the Individual Defendants exercised their power and authority to cause IonQ to engage in the wrongful acts complained of herein. The Individual Defendants, therefore, were "controlling persons" of IonQ within the meaning of Section 20(a) of the Exchange Act. In this capacity, they participated in the unlawful conduct alleged which artificially inflated the market price of IonQ securities.

287. Each of the Individual Defendants, therefore, acted as a controlling person of IonQ. By reason of their senior management positions and/or being directors of IonQ, each of the Individual Defendants had the power to direct the actions of, and exercised the same to cause, IonQ to engage in the unlawful acts and conduct complained of herein. Each of the Individual Defendants exercised control over the general operations of IonQ and possessed the power to control the specific activities which comprise the primary violations about which Plaintiffs and the other members of the Class complain.

288. By reason of the above conduct, the Individual Defendants are liable pursuant to Section 20(a) of the Exchange Act for the violations committed by IonQ.

**PRAYER FOR RELIEF**

**WHEREFORE**, Plaintiffs demand judgment against Defendants as follows:

- A. Determining that the instant action may be maintained as a class action under Rule 23 of the Federal Rules of Civil Procedure, and certifying Plaintiffs as the Class representatives;
- B. Requiring Defendants to pay damages sustained by Plaintiffs and the Class by reason of the acts and transactions alleged herein;
- C. Awarding Plaintiffs and the other members of the Class prejudgment and post-judgment interest, as well as their reasonable attorneys' fees, expert fees and other costs; and
- D. Awarding such other and further relief as this Court may deem just and proper.

**DEMAND FOR TRIAL BY JURY**

Plaintiffs hereby demand a trial by jury.

Dated: November 22, 2022

Respectfully submitted,

**LEVI & KORSINSKY LLP**

By: /s/ Jordan A. Cafritz

Jordan A. Cafritz (#20908)  
1101 30th Street NW, Suite 115  
Washington, D.C. 20007  
Tel: (202) 774-5795  
jcafriz@zlk.com

Adam M. Apton  
55 Broadway, 10th Floor  
New York, NY 10006  
Tel: (212) 363-7500  
aapton@zlk.com

*Lead Counsel for the Plaintiffs and the  
Class*

**POMERANTZ LLP**

Jeremy A. Lieberman (*pro hac vice*)  
Brian Calandra (*pro hac vice application  
forthcoming*)  
600 Third Avenue  
New York, New York 10016

Telephone: (212) 661-1100  
Facsimile: (212) 661-8665  
jalieberman@pomlaw.com  
bcalandra@pomlaw.com

**POMERANTZ LLP**

Patrick V. Dahlstrom  
(*pro hac vice* application forthcoming)  
10 South La Salle Street, Suite 3505  
Chicago, Illinois 60603  
Telephone: (312) 377-1181  
Facsimile: (312) 377-1184  
pdahlstrom@pomlaw.com

*Additional Counsel for the Plaintiffs and the Class*

**THE HAO LAW FIRM**

Junbo Hao  
Beijing Hao Junbo Law Firm  
Rom 3-401 No.2 Building  
No.1 Shuangliubei Street  
Beijing, PR China 100024  
Telephone: 0086 137 18052 888  
Tel/WeChat: 137 18052888  
E-mail: jhao@haolaw.cn

*Additional Counsel for Named Plaintiff Ng Yu*